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THE PHYSICIAN AND SURGEON

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ORIGINAL ARTICLES.

PROLAPSE OF THE FUNIS UMBILICALIS.*

BY E. P. CHRISTIAN, M. D., M. A., WYANDOTTE, MICHIGAN.

The descent of the umbilical cord in advance of the head of the child, or what amounts to the same, so far as effects upon the child, its descent together with the head, so as to be compressed by it, is an accident of labor of very infrequent occurrence according to statistics of systematic writers on Obstetrics.

It is an accident which simple, and without other complication, adds nothing to the severity, retardation, or danger of parturition to the mother; in fact, a simple prolapse of the funis is a guarantee against the existence of a complication which might prove of serious import to both mother and child; be a cause of difficult and retarded labor, and of a variety of accidents to both. I refer to too short a funis—a funis either absolutely or accidently shortened, as by circumvolutions about the child's neck or some part of its body.

In a simple prolapse, that is, with a normal presentation of child, and insertion of placenta, there must be a funis much exceeding eighteen to twenty inches in free length, and no complication from too short a cord, can be expected to occur in such a case.

The occurrence of a prolapsed funis, is also, as a rule, presumptive evidence of the existence of a capacious pelvis, a condition favorable to a speedy and easy delivery. This will not, however, be found to be invariably the case.

---

*A paper read before the Ann Arbor Medical and Surgical Society, December 14, 1880.

But while this condition of uncomplicated prolapse, may cause no special anxiety, so far as the mother is concerned, the case is very different as regards the child. In that respect it is fraught with fearful risks compromising its life in a very large proportion of cases, by the mechanical obstruction to the placental circulation, as the cord becomes compressed between the descending head and the pelvis; and but a very short period of such compression is sufficient to entirely dam the circulation and destroy the child, or asphyxiate it beyond recovery. The fatality of children so born approximates even that of those subject to operation of turning.

And yet, it is a matter of regret that while the fatality is so great, it is not necessarily so, or altogether unavoidable. In all communities, and particularly in the country, a very large proportion of obstetric cases are in the care of midwives, or women attendants; probably at least fifty per cent. in cities and villages, and perhaps seventy per cent. in the country. These frequently fail to detect the unnatural condition, if but a small knuckle has descended and receives the compression, or, if detecting it, are unaware, or reckless of the danger to the child, so long as labor progresses favorably to the mother.

The danger to the child is the same, whether but an inch be receiving the impress of the head, or a yard be down protruding in coils beyond the vulva. This latter condition would most likely suggest the necessity of sending for a physician when, in fact, the need of one may not be so imperative as when so small a part was being compressed as to have escaped detection.

The condition is one, which for the safety of the child, requires immediate and prompt attention and correction. It admits of no delay. But if detected by the attendant, and a physician sent for, the time often lost before his arrival, from a point perhaps several miles away, labor all the time progressing fast and furious, has been fatal to the child, and he finds on making his examination, a cold and pulseless cord. The attendants stand shocked or incredulous when told that the child is dead, while labor has all the time been advancing so auspiciously and fairly for the mother.

Though these circumstances are a large factor in the high rate of mortality of children in cases of presentation of funis, they are not alone responsible for it, even in simple uncomplicated cases. The physician, when the sole attendant from the beginning of labor will have cases in which, from a variety of circumstances, he will be unable to effect or retain reposition of the cord. The woman will be too much exhausted to retain the genu-pectoral position sufficiently long, or the pains will be too quick and severe to allow her to assume the position, or perhaps so much of the cord will be down as to make its return an impossibility.

In a large majority, of uncomplicated cases, however, if called before the child is already lost, he will, we believe, be able to replace the cord and save the child by the so-called postural method of Dr. T. G. Thomas of New York City. This consists in placing the woman on her knees and breast, thus allowing the force of gravitation to act toward the fundus uteri instead of the outlet, then carrying the funis back over the head with the hand. The force of gravity will carry it backwards, while the head, in the meantime, engaging in the outlet by the force of parturition, the return of the cord is prevented after the patient assumes the supine or side position. This method we believe, is now generally recognized by the profession as the most successful one.

Thus far we have referred to simple and uncomplicated cases of prolapse. But in a very large proportion of cases we shall find other complications which have favored the descent of the cord, and which may even have caused the descent of a funis of normal length, and, in a narrow pelvis, conditions greatly adding to the severity and danger of labor to the mother, and of about equal fatality to the child as prolapses of the funis when occurring without this as a concomitant. These complications are shoulder presentations, and insertion of the placenta near the verge of the os, or partially covering it; cross positions, and partial placenta prævia.

In these cases the first and foremost consideration is to be given to the mother whose safety is endangered, and while the life of the child is in doubly increased jeopardy, yet its chances can only be favored by correcting the complication which endangers the mother. In the case of a cross position this is to be corrected, if possible, by combined external and internal manipulation, pushing up the shoulder, and external pressure to change the axis of the child and bring the head down, when the funis may be replaced, as in simple prolapse. In a majority, I believe, it will be found necessary to resort to podalic version. I have found it so, for the reason that in such cases, when I have seen them, I have judged no time was to be lost in doubtful and uncertain methods. In such cases the cord has returned with the turning of the child.

In the case of placenta prævia, labor having commenced (and no falling of the funis can occur until such is the case), the labor is to be terminated with dispatch, for the safety of both mother and child. If the head is sufficiently low, by the forceps, possibly by version. In the former case, the attempt may be made to reduce the cord, though the profuse hemorrhage will usually determine one to waste no time in this way, when a speedy termination of labor is not only essential for the mother's safety, but about equally safe for the child. If the head is too high for the forceps to be readily applied, version will be much more easily accomplished and will be resorted to, when the funis will probably ascend at the time. This has been my own experience.

In regard to the statistics of prolapsed funis, I shall make use of those compiled by Dr. J. G. Meacham of Racine, Wisconsin, in a paper entitled "Presentation of the Funis with Notes of Ten Cases," a reprint from the transactions of the State Medical Society of Wisconsin. These statistics, he says, are credited mainly to Churchill's System of Midwifery, but also to some other sources.

From this paper we take the following: "In 98,512 collected cases of labor, it occurred four hundred and one times or once in two hundred and forty-five and one-half cases, but in individual practice, the result is far different. Mr. Bland, in one thousand eight hundred and ninety-seven cases, met it but once, while Dr. Churchill, in one thousand five hundred and twenty-five cases, met with it seven times. In a smaller number, six hundred and ninety-one cases, by Mr. Gregory, it occurred seven times; while in six hundred and forty by Mr. Granville, it happened but once. Dr. Thomas Savage, of Birmingham, in one thousand four hundred cases, met with it four times; Dr. Kemper of Muncie, Indiana, in four hundred published cases, met with it twice. Dr. E. P. Christian, in one thousand five hundred and sixteen cases, met with it twenty-three times. In my own practice of nine hundred and thirty-one cases, I have met with it ten times, or once in about ninety-three cases."

From these statistics of Dr. Meacham, we learn that while in nearly a hundred thousand (98,512) collected cases, the ratio was one to two hundred and forty-five and one-half, yet in individual practice, it has varied from one in about sixty-six and two-thirds in my own practice, according to the statistics communicated by me to Dr. Meacham, one in ninety-three in Dr. Meacham's practice, one in ninety-eight and one-half by Dr. Gregory, one in two hundred by Dr. Kemper, one in two hundred and eighteen by Dr. Churchill, one in three hundred and fifty by Dr. Thomas Savage, to one in one thousand eight hundred and ninety-seven by Dr. Bland. My own experience in these cases, to which Dr. Meacham does me the honor to refer, is embraced in a series of ten cases, published in a paper in the *Detroit Review of Medicine*, March, 1870, and also, a series of thirteen cases, communicated to him by correspondence, and not otherwise published. To these I am able to add one more, occurring since then, making a total of twenty-four and changing somewhat the ratio. In the first ten cases published in 1870, the ratio stood at about one in ninety-one, not varying greatly from Dr. Meacham's one in ninety-three. In the twenty-three cases communicated to Dr. Meacham the ratio had become increased to one in sixty-six and two-thirds, and with the twenty-fourth case becomes increased to about one in sixty-three and one-half.

It will be observed that my experience in these cases, as compared with published statistics, is at least exceptional, not to say remarkable, and this of itself would be a sufficient reason for giving the results of it to the profession.

If the occurrence of so large a number of these cases in one individual's practice is exceptional and remarkable, it is also a matter of curiosity how the cases may run in general practice. While in the first series of ten cases the ratio was as one to ninety-one labors, the last five of that series occurred in a succession of ninety labors, or one to eighteen. While the second series of fourteen occurred in a total of six hundred and twenty-nine labors, or one in about forty-five, there was in that number a succession of two hundred and twenty-four cases of labor, without a case of prolapsed funis, and again a succession of sixty cases in which it occurred four times, or one to fifteen.

It should be stated by way of explanation of so large a ratio of these cases to total of labor cases, that while they have all come under my care, the number of cases of prolapsed cord does not represent the ratio of cases to my own labor cases alone, but to that of a much larger number. It represents the ratio to the total of my own midwifery practice, and that of several midwives of large experience, and in a considerable surrounding territory. The ratio to total number of labors, it would be impossible to state, yet it is safe to say that the total of labor cases represented should be doubled. Thus, as an index of the relative frequency of its occurrence, reducing the ratio one-half from what my own exclusive midwifery practice would indicate.

The history of my second series of fourteen cases, which have never been published, only as made use of in gross by Dr. Meacham, I shall now give in brief detail, both for the purpose of showing the variety of complications which may occur with this accident, and as the evidence upon which is founded any deductions, which may be stated as drawn from their observation and consideration.

Case XI.—June 20, 1871, Mrs. N. Patient a hard-working German woman, accustomed to outdoor labor; fifth confinement, attended by midwife. I was sent for. Discovered a shoulder presentation, with arm and coils of funis in vagina. Version was readily affected, with patient in genu-pectoral position, after failing to succeed with her in a supine position. The gravitation of fœtus from pelvis backwards in this position made comparatively easy, what was found difficult in the ordinary position. It also aided the retrocession of the funis. There was delay in delivering the head and the child was still-born, in consequence, I think, of this delay. Female child. This woman was delivered by me, about two years previous, by version, for a shoulder presentation, and also again, a couple of years after in the same way for the same difficulty, being at first in care of a midwife on all these occasions. There was no prolapsus of the cord in the other labors. The fact is noted by writers that some women are extremely liable to a succession of cross presentations, probably due to some peculiarity in the conformation of the pelvis.

Case XII.—June 24, 1871, Mrs. K. A hard-working Irish woman, seventh labor. When called in, labor well advanced, head presenting with os fully dilated, and a coil of funis in vagina in advance of head. I put the patient on knees and breast, passed the cord over the head, where it was retained, and the child was in due time born living. Boy.

Case XIII.—August 15, 1873, Mrs. S. Hard-working German woman, fifth labor. Attended by midwife, as she had been in all previous labors. I was called in and found right arm of child protruding from vagina, and coils of funis from os uteri. With woman lying upon her back I introduced my arm, turned the child, and delivered her of a living boy.

Case XIV.—March 30, 1874, Mrs. B. German, second labor. Attended by woman who sent for me on account of protracted first stage and delay in descent of child. On rupturing membranes an arm protruded and coils of funis fell into my hand. Accomplished version without difficulty with woman in supine position, but delay of the head caused death of the child by asphyxia. Boy.

Case XV.—August 10, 1874, Mrs. S. Fifth labor. Laboring woman. Was in charge of midwife until I was sent for. I found several inches of the funis external to the vulva; left arm of child in vagina, which was also full of clots of blood, and much of the same in the bedding. In clearing these out, I found the placenta blocking up the os uteri. I passed my arm between this and the anterior wall, gained a leg of the child, turned and delivered a dead boy. My opinion is that death in this case resulted from separation of the placenta, as there was no great delay or difficulty in the delivery. Unfortunately my notes made no mention of the state of the funis. Perhaps the dangerous co-existent conditions of the woman, making requisite the prompt adoption of means for her safety, without regard to that of the child, caused me to neglect the observation of that fact.

Case XVI.—September 11, 1874, Mrs. F. German-American, second labor. Patient lived six miles distant in the country, and had been in labor about eighteen hours under care of women before I was sent for. This was a case of simple prolapse from too long a cord, which was cold and pulseless when I arrived, os being fully dilated. I applied forceps and delivered a dead boy. This patient's first labor was very tedious and difficult, and was terminated with forceps by another physician.

Case XVII.—December 10, 1874, Mrs. B. A hard-working

German farmer's wife, living six or seven miles distant; second labor and under care of women incapable of understanding the dangerous condition of affairs. Had waited from the afternoon of the 9th until 2 P. M. of the 10th, before sending for a doctor, in expectation that nature and their aid would be all sufficient to terminate the labór. The patient was a very small woman. On examination I found cold and pulseless coils of the funis external to vagina, and shoulder and head packed down in pelvis, with patient much exhausted. It was with a good deal of difficulty that I succeéded in pushing back the child, gaining a leg and effecting version. This was accomplished with delivery of a dead boy.

These last three cases occurred in a period of four months, from September 11 to December 11, 1874, and, to the next succeeding case of prolapse of the funis, in sixty labors.

Case XVIII—March 15, 1875, Mrs. W. English or American, accustomed to doing her own household work; fifth labor; simple, uncomplicated case of prolapsus of the funis, with a capacious pelvis. Pains so quick and strong, that it was impossible to get the patient in genu-pectoral position for replacing the cord between the pains, and without replacement the child was born living and very slightly asphyxiated, crying lustily in a very short time. Male.

Case XIX.—February 29, 1876, Mrs. G. Canadian, a hard-working woman; fifth labor; eighth month of pregnancy. Parturient pains with considerable flowing, with expulsion of some clots, came on evening of 26th. I was sent for, but being otherwise engaged, did not see the patient until morning. The flowing continued moderately through the night, but pains became easier. At 10 A. M. next day I was sent for again. Patient had felt violent convulsive movements of the child, which were the last of its movements. Hemorrhage, and pains, and motion had all ceased on my arrival. Examination showed placenta covering the mouth of the womb. Hemorrhage returned again on the morning of the 28th, but was checked by ergot. Labor set in on the morning of 29th; examination showed cord in vagina pulseless and flabby; no more hemorrhage during labor. Child was born dead, with already commencing discoloration and separation of epidermis from abdomen and other parts. Child had been dead since convulsive movements of 24th. Girl.

Case XX.—August 23, 1876, Mrs. J. A hard-working German woman; seventh labor. This was a simple case of prolapsed cord, and funis of excessive length. The woman was attended by a midwife, who sent for me on discovering the condition after rupture of the bag of waters. The impossibility of inducing the patient to put herself in the genu-pectoral position, and immense length of the prolapsed cord, rendered efforts at its replacement ineffective; I therefore applied forceps and delivered, but the child was still-born. Boy.

Case XXI.—December 31, 1876. Mrs. D. American, accustomed to perform her own household duties; second labor. The subject was a patient of Dr. Carleton of Trenton, who sent for me in the night to see the patient with him on account of puerperal eclampsia, at seventh month of gestation. She had had a succession of violent convulsions for several hours before my arrival. They were still occurring at intervals, and she was unconscious. Examination showed that labor was progressing. This was aided by forced dilatation with fingers and hand. When the os was sufficiently dilated, the membranes were ruptured and the funis came down with the waters. The forceps were applied as quick as practicable, and the woman was delivered of a dead boy. The patient remained unconscious for several hours, with a few convulsions at increasing intervals. These ceased, and there was a return of consciousness in the forenoon. The patient seemed to be doing well until third day, as I learned from Dr. Carleton, when acute pulmonary congestion set in, to which she succumbed. Was this a reflex from the uterus, through the cerebro-spinal and back to the pulmonary branches of the pneumogastric? Was it paresis of the nervous supply to these organs, from the damage to the nervous centers during the stages of convulsive action? Whatever the explanation, the fact has been observed, of acute pulmonary congestion following violent cerebral troubles so frequently as to indicate a causal relation.

Case XXII.—March 22, 1877, Mrs. B. American; accustomed to household duties; seventh labor at seven and one-half months. Simple prolapse reduced by putting patient in genu-pectoral position, and passing cord over child's head. The child, a boy, was born alive and well and is still living.

Case XXIII.—August 9, 1879, Mrs. R. A hard-working woman; German; eleventh labor. Patient lived six miles distant and was attended by a woman, who discovered something wrong on the rupture of the membranes, and I was sent for. Three hours' time must have passed before my arrival, with labor pains regularly supervening. I found a simple prolapsus of the cord. The woman was put in the usual position, the cord returned and the child born living. A girl.

Case XXIV.—July 30, 1880, Mrs. P. French-Canadian; fourteenth labor; patient accustomed to hard work. Living out of town, the patient was in labor all night, attended only by neighboring women. In the morning a midwife was called in, who, on discovering the condition, sent for me. It was nearly noon before my arrival; the woman then having been in hard labor eighteen or twenty hours. I found the left arm of the child and a portion of funis occupying vagina, and the left shoulder and head jammed together in the pelvis, the cord flabby, and the woman already much exhausted by nearly twenty-four hours of violent pains effectual only in the production of a bad case of impaction. I wasted no time in external manipulation, put the woman as soon as possible in position, on knees and breast, succeeded by help of gravitation, in pushing back the head, so as to introduce my arm, with much difficulty brought down a leg, and turned and delivered her of a dead boy. The placenta was, I think, separated in the act of turning; judging from the immense deluge of blood following the child, and its being found loose and brought away so soon as attention could be given to it. The woman died of peritonitis on the fourth day.

These cases, with the ten reported in a paper published in *Detroit Review of Medicine*, March, 1870, make a total of twenty-four cases of prolapsed funis coming under my care.

It is to the history of such of them as have had no previous publication, and to generalizations from all of them, that this paper is restricted. There is no pretense to an examination or consideration of the bibliography of the subject. The literature is, however, exceptionally meagre and unsatisfactory, even in systematic works on obstetrics. Dr. Meacham mentions a lately published work as a text-book on obstetrics, which makes no mention of the subject.

The first point which suggests itself is the nationality of these cases, as an inference from this, domestic habits, as having a possible influence, or bearing upon the production of this accident. As regards this influence in the production of cross presentations as a complication and cause of prolapsed funis, I think there can be no question.

Of the twenty-four cases twelve were German, Polish and German-American; all these accustomed to laborious occupations in the field or garden. Five were Irish, three French-Canadians, one English, and three American, and all accustomed to more or less severe labor. All the seven cases of cross presentation were in German women.

The ten cases reported by Dr. Meacham, were all in foreigners, viz: Eight in German, Danish, or Norwegian, and two Irish. Dr. Meacham says: "It appears that this complication happens nearly three times as often in German practice as it does in French, and about twice as often in English as in French." In regard to the mortality Churchill's statistics indicate it to be more than two-thirds of the whole number. Dr. Meacham, with eight uncomplicated funis presentations, one funis and breech, and one funis and foot, ten in all, saved six children, the latter two cases among them. Of my own cases, of the first series of ten, four were living; of the second series of fourteen, five were living; total, nine out of twenty-four. Of fifteen cases of simple prolapse, uncomplicated with other accidents, eight were living. In four cases, at least, the child was dead when I was called in. There were seven cases of version for shoulder presentations, in one only of which, was the child born living. The forceps were used in four cases, in two of which the children were living, in the other two the child was dead when examined, and the forceps were used only to terminate the labor. Of the twenty-four cases, fifteen were uncomplicated, and nine complicated with other accidents. Of these, six presented an arm and funis; one presented arm, funis and placenta prævia; one presented placenta prævia, or detached placenta; one puerperal eclampasia. Of the nine living children, in five the cord was replaced by the postural method and the case left to nature. In one, it was replaced postural method and then delivered by forceps. In one, delivery by forceps without reposition. In one, delivery by natural efforts without reposition. In one case only, when the cord was reposited was there a failure to save the child. In this case, with inefficient pains, the woman was unable to retain the position sufficiently long, the funis came down again with resumption of the supine position, and the child was lost.

It is curious to observe the singular predominance of male children with this complication. Of my first series of ten cases, nine were male children. Of Dr. Meacham's ten cases, eight were male children. Of my second series of fourteen, herein detailed, eleven were male children. What is the explanation of this accident being so much more liable to occur with the parturition of males? or are they simply singular happenings? In every instance of complication of this accident with shoulder presentations, the infant was a male; and, indeed, in every case of cross position but one in my practice, with or without a prolapsed funis, the infant has been a male. As regards these cases, there were two fatal to the mother; one from puerperal eclampasia and one from peritonitis after turning an impacted fœtus, her fourteenth labor.

It is not a very uncommon occurrence in early miscarriages from fourth to fifth month, for the funis to come down with the fœtus. The query has suggested itself to me whether these were not cases of wrong attachment of placenta, attachment near the os, which, if going to full time, would have presented examples of placenta prævia, but in which this condition has proved the cause of abortion or miscarriage. Whether, in fact, this wrong attachment may not be a comparatively frequent cause of abortion, and an explanation of the comparative rarity of placenta prævia at full term. As this condition, malposition of the placenta might be supposed to be an accident, likely to be of frequent occurrence from violence to the mother, from falls, jars, or shock of any kind immediately after conception, we may ask whether in the constant provision of safeguards against the various accidents of pregnancy and parturition, nature has not here also provided, in the comparatively little dangerous process of a physiological miscarriage, a safeguard and protection from the fearful hazards of a placenta prævia, at or near full term.

This paper, however, is not concerned with placenta prævia further than its connection with the subject of prolapsus of the funis. These remarks and suggestions are not considered entirely irrelevant, from the fact of the not very infrequent occurrence of a prolapsed funis in early miscarriages, and as a possible explanation of the condition.

In conclusion, then, we submit the following propositions as fairly inferable from the above consideration of the subject: That a large proportion of simple uncomplicated cases of prolapse of the funis, are caused by a low attachment of the placenta. That this low placental attachment, and also, shoulder presentations, a frequent complication, are the result of external violence in the former, probably in a very early period of the pregnancy. That a placental attachment near the verge of the os uteri, operates as a frequent cause of abortions and miscarriages; and finally, the following queries: Do these accidents, shoulder presentations, and prolapse of the funis occur so generally with male infants, as indicated by these comparatively few statistics? and if so, have we a sufficient explanation of the fact, in the relatively faster increasing weight, and more active intra uterine movements of the male fœtus?

REMARKS ON THE PULSE: NOTES FROM A CLASS LECTURE

BY ALONZO B. PALMER, M. D., A. M.,
Professor of Principles and Practice of Medicine in the University of Michigan.

Since the fever thermometer has come into such general use, and the sphygmograph has promised to reveal with more precision the force and character of the cardiac and arterial contractions, less attention has been given to conditions of the pulse discovered by the fingers of the physician; and the *tactus eruditus* in pulse feeling once so much cultivated, has been neglected. Though the fever thermometer is now in almost every physician's pocket, and its daily use is of great advantage in diagnosis and in furnishing therapeutical indications, a sphygmograph is possessed by few, the method of its use is not generally understood, and it is very seldom brought into requisition in the sick room; and the inconveniences of its use will prevent its being a common instrument in the hands of the general practitioner in the daily rounds of his common work.

In the practice of blood letting so common fifty years ago, the fact of the presence of inflammation was sufficient, in the estimation of many, to call for this remedy in one form or another, but the pulse was consulted to determine the mode, whether general or local, and the extent to which it was to be carried. With the comparative abandonment of this method of depletion, the importance of so closely watching the pulse may have diminished, but its conditions still furnish important indications of morbid processes, and of the means of correcting them; and particularly of the vital activity and the power of endurance of the patient. The conditions of the pulse and the common manner of observing them should be studied.

In observing the pulse three points should be kept in view; the moving, propelling force of the heart—the motion of the blood—and the state of the artery. The physiology of the circulation is supposed to be understood by the students attending these lectures, but a few points may be referred to as a basis of its pathology.

These conditions have their normal standards, but they are varied physiologically, and are still more varied in disease.

The pulse varies in frequency of beat by age. The pulse of the new born infant is from about 120 to 140 beats per minute; one year of age, 110 to 120; two years, 100 to 110; three years, 95 to 105; four years, 90 to 100; at puberty, 80 to 90; manhood, 70 to 75; vigorous old age, 60 to 70; decrepitude, from 70 to 80. The pulse in women is from 6 to 12 beats faster than in men, and in warm climates it is more rapid than in cold. Temperature has a marked effect upon the frequency of the pulse. If a fluid of different temperatures be thrown through a separated heart, still posessed of vital excitability, the frequency of the pulsation rises and falls in proportion to the temperature, unless the temperature be excessive, when the irritability is completely destroyed. In disease, the fever heat increases the frequency of the pulsations; but various other circumstances influence its motions. Generally in the adult when the temperature of the body is 37° Centigrade or 98.5° Fahrenheit, the pulse is 78.6; when 38° Centigrade or 100° Fahrenheit, it is 88.0; when 39° Centigrade or 102.3° Fahrenheit, it is 97; when 40° Centigrade or 104° Fahrenheit, it is 105; when 41° Centigrade or 106° Fahrenheit, it is 110; when 42° Centigrade or 108° Fahrenheit, it is 122. An increase of 2° Fahrenheit on an average increases the pulse eight beats. The condition of the nervous system, physical or mental excitement, the position of the body, lying, sitting or standing, the degree of weakness or strength, as well as age and sex vary its frequency. Between lying down and standing the pulse varies from five to twelve beats in health, and the erect position often increases it much more in disease.

In examining the pulse we observe not only its time, but force. equality, size, hardness, and various other qualities. We judge of the state of the heart, the volume of the blood, and the condition of the artery.

The terms, strong, weak, sharp, jarring, rapid, quick, slow, unequal, intermitting, and fluttering, indicate the character of the impulsion of the heart. The words, full, large, and small, have reference to the volume of the blood flowing through the artery. The terms hard, soft, contracted, open, and chorded, have reference chiefly to the state of the artery. The terms thready, gasy, firm, and tense, have reference to the force of the heart, the volume of blood, and the state of the artery together.

The experienced observer distinguishes by the finger whether the artery fills slowly or gradually—whether the pulse is thus quick or tardy in each individual movement; he notices how high the pulse wave is—the largeness or smallness of the pulse; how widely the artery is distended—its fulness or its vacancy; in what degree of tension is the artery—its hardness or its softness; and whether the artery fills evenly or irregularly, producing a vibratory and sharp, or smooth and rounded pulse.

The active fever pulse of a previously healthy adult, is more or less large, full, hard, or quick, as well as rapid; and it gains these properties chiefly by the influence of a quicker and stronger contraction of the heart. In pneumonia and other acute inflammatory fevers, this characteristic pulse is often observed. But in an advanced stage of such diseases, and sometimes in the early stages, there may be a small, empty, and soft pulse, one that is thready, scarce perceptible, and at length absent at the wrist. The changes in the heart beats; changes in the resistance at the extremeties of the vessels due to variations in the calibers of the small arteries, caused by the contraction of their muscular coats, in the arteries of particular points or of the system at large; and changes in peripheral resistance to the flow of blood through the capillaries, due to alterations in the adhesiveness of the walls, or the relations—the attractions of the blood and tissues, such as occurs in inflammation; and changes in the quantity of blood in circulation, will all vary the characters of the pulse. Most of these conditions are under the influence of the nervous system—the exciting and inhibitory nerves, and through the action of this system chiefly, an organ has more blood carried to it when at work than when at rest, and in inflammation than when in health. The vital endowments of the tissues, however, exert an influence, and all these conspire to vary the circulation and the pulse.

When the blood pressure is high from obstruction to its free flow, in the small arteries and capillaries, there is more resistence to the contraction of the ventricle, and the heart's work is increased. The contractile energy of the heart becomes greater and the blood is thrown into the arteries with more force, giving hardness and tenseness to the pulse. The increase of blood pressure, however, does not increase the frequency of the beat. On the contrary it has been stated that "the rate of the beat is in inverse ratio to the arterial pressure." This however, is not always the case, and when the vagus is disturbed in its function, and probably in other disturbances of the nervous system the results are varied, and no positive rule without exceptions, can be established.

These statements are intended to show some of the means by which the pulse is varied, and to give an understanding of some of the indications of differences in its beats.

A rapid pulse may indicate a feverish increase of temperature, or a low grade of blood pressure—a deficiency of that fluid, or it may indicate a morbid irritability of the heart or of the nervous system. It does not of itself indicate an increased quantity of blood or the sthenic action of the heart, and is not an indication, even according to the depleting system, of lowering treatment.

When the pulse is comparatively slow, but full, firm, and hard, the blood pressure is great, either from obstruction at the vascular periphery, or from a large quantity of blood in the system, or from a sthenic excitement of the heart. In such cases cardiac sedatives may be useful, and depleting measures can be borne.

There are however, complicated circumstances, giving to the pulse a great variety of characteristics, more even, than those that have been named.

There may be presented a full, slow, vigorous stroke of the artery, a full tense and frequent pulse, a hard, incompressible, quick pulse, feeling like a tightly drawn cord, a soft, open, compressible pulse, a small, rapid, and weak pulse, and a creeping, soft pulse.

After a copious loss of blood the pulse often becomes vibratory, rapid, and thrilling, causing the sensitive and appreciative finger to tingle, almost as from a galvanic current. This indicates supporting measures.

The indications which many of the different kinds of pulse afford, will be mentioned in connection with the diseases in which they are observed.

In examining the pulse some practical rules should be observed.

In an acute disease the patient should lie in a recumbent position, and when comparisons are to be made, he should lie in the same position at each examination.

The mind of the patient should be calm, and free from emotional agitation or excitement, and the body should be at rest.

In feeling the pulse three or four fingers should be applied to the radial artery in front of the wrist. After observing the frequency, the fingers should be pressed on the proximal part of the artery felt, and by the finger, at the more distant part it is ascertained whether the flow of blood is interrupted, and by the first fingers it is ascertained how much force is required to interrupt the flow.

There should be no pressure on the course of the artery, above by the dress or any other means. The size, the hardness, the quality in all the respects named should be observed with a light pressure, but sufficient to obtain a distinct impression of the qualities to be noticed.

Both wrists should be examined, and when any unusual distribution of the radial arteries is present, other arteries, as the carotid, or the temporal should be explored.

Often the hand, the ear, or a stethoscope should be applied to the chest to observe the force of the heart's beat against the ribs, as well as the force of the blood sent to the arteries.

The pulse in a severe and acute case should be examined more than once at each visit, and its frequency counted by the watch.

The healthy adult male pulse may be described as regular, equal, compressible, moderately full, and swelling slowly, and evenly under the finger. In the healthy female and in children, it is not only more frequent, but quicker in each beat and smaller than in the adult male.

In old age the coats of the artery are apt to become firm, and sometimes calcareous, giving a hardness, not dependent upon increased force..

There are many peculiarities and idiocyncrasies—some persons in health, having very slow, and others very rapid pulse.

The natural pulse must be enquired after when unusual conditions or those not in harmony with other symptoms are observed.

Various irregularities of the pulse are observed in diseases of the heart, both organic and functional; and a dicrotic pulse —one which gives a sense of two impulses at each heart contraction—a double wave—is a condition not unfrequent in low forms of fever, with much heart weakness and irritability, or irrregularity in its innervation. When such a pulse continues many hours it is an unfavorable indication. When it is followed by an epistaxis, and after that disappears, its indications are not so unfavorable. In some hemorrhagic erethisms it persists to the last, resisting measures to subdue it.

The dicrotic pulse when soft, and when due to the heart's stopping in the midst of its contraction to take a rest, may indicate only weakness and require supporting measures.

When the dicrotic pulse is *hard*, it indicates a perversion of innervation which may require other means, and it will be either more or less dangerous according to the various circumstances.

A supplementary wave or impulse of the pulse at the wrist has been noticed as resulting from a reaction of the arteries concerned in the palmar arch. It is however, described by but few authors on the pulse. This recurrent palmar pulse should be distinguished from the small, hesitating, feeble pulse of true adynæmia. The palmar recurrent pulse is present in some pulmonary affections, as in the latter stages of severe pneumonia, when the left heart is comparatively empty and the right heart and veins are surcharged with blood. In this condition we sometimes get a distinct recurrent pulse wave, by means of the palmar anastomosis, while in true adynæmia, this retrograde pulse wave is absent or nearly imperceptible.

A jerking pulse is one which is abrupt, with a projection of the artery which quickly recedes. It is characteristically observed in insufficiency of the aortic valves.

While the pulse is only one of the means of making a diagnosis and forming indications, it is a means of importance and should receive a proper degree of attention.

These examples are illustrative of the importance of this subject, and will furnish suggestions for its proper study.

The sphygmographic study of the pulse, is of interest, and furnishes important indications. It is not entered upon here.

CASES FROM PRACTICE.

BY GEORGE W. ORR, M. D., CENTRAL MINE, MICHIGAN.

Case I—Excision of Elbow Joint.—Con. S., aged nine, four years ago fell and injured elbow joint. Was treated for a sprain. No doubt this was not the only injury, for four years after, when I saw him, I found the joint firmly ankylosed. On September 1, 1880, with the assistance of Dr. Woolway, I removed the entire articulation. After the little fellow was under chloroform I endeavored to bend the elbow, but it would not yield. I made a free incision, commencing two inches above olecranon, and extending the same distance below. I then carefully raised the ulnar nerve and placed it out of the way of the saw. I removed the articulation, trimmed ends of bones with but little trouble; loosened bandage. Was surprised to find no arterial hemorrhage. I then drew the edges of the wound together with silver sutures, leaving ample space for drainage, placing the arm on a board, ordering cold applications, which controled inflammation. The discharges were free for a few days, but soon subsided and the wound closed. At the end of two weeks I commenced working the joint. It is now three months since the operation, and the movements of the joint are quite free and are improving slowly. In time I am confident the little fellow will have a first-rate joint.

Case II—Circumcision.—James C., aged nineteen This young man came to me complaining of a nervous, depressed condition, which was difficult to account for. I found he had a long, close prepuce with a slight irritation, and mucus discharge. I at once ascribed his trouble to his penis, and advised an operation which, with the assistance of Dr. Woolway, I performed September 28th. I found the membrane adherent to the greater portion of the glans, but readily succeeded in their separation. I removed nearly an inch of prepuce, and stitched the membrane and skin (their edges) together with silver sutures. On the third day I removed the sutures. Union was immediate. On the fourth day the young man returned to work. He tells me he is a new man, and all his disagreeable feelings have disappeared.

Case III—Fracture of the Scapula.—William P., aged twenty-nine. While in a stooping position in one of the levels in the mine, a drill fell several feet, striking Mr. P. on the right shoulder, fracturing the scapula from superior scapular notch to inferior angle. I saw him in a short time after the accident, and dressed his shoulder with a figure of eight bandage, rather loosely at first, for as I anticipated, a considerable swelling followed. As the swelling subsided I tightened the bandage and raised the shoulder by a small pad in the axilla, firmly fixed arm and elbow to the side, fingers pointing to opposite shoulder. In five weeks Mr. P. again started work, and it would be difficult for any person that did not know which shoulder was injured to say which was the fractured scapula.

Case IV—Dislocation of the Sternal end of Clavicle.—Albert C., aged eighteen. Fell from a wagon in September, struck on head and right shoulder, dislocating sternal end of clavicle, which I found carried upwards and inwards, and partly resting on upper end of sternum. I placed a good sized pad in axilla and applied figure of eight bandage, gradually drawing clavicle into place, and when in place I firmly bound arm and elbow to body. At the end of three weeks the young man, contrary to directions, resumed his place, doing the ordinary work of a clerk in a general store. I was greatly surprised to to find the union sound and perfect in so short a time.

Case V—Fracture of the Clavicle.—Baby E., aged fourteen months. Fell from a high chair, fracturing clavicle in outer third, transversely. I applied figure of eight bandage with small pad in axilla, and bound the arm firmly to the body. The union was perfect and in every way satisfactory.

Case VI—Opacity of the Cornea of both Eyes.—Treated by a quack, and the results. Mrs. Thomas U. has suffered for a number of years from almost complete opacity of both corneæ. She once visited the University of Michigan and Detroit; was told by Dr. Frothingham, Dr. Palmer, and others, to go home, and that a better condition of health and time were her best remedies. She returned, and as her health improved her vision improved a trifle. She has consulted a number of quacks, all of whom promised relief, as is their usual custom. Last January a notorious quack by the name, I think, of Townsend, assured her that he could take the *film* off, and would do so for $10, which was very reasonable for so much relief. He gave her a strong solution of argenti nitras to be applied once a day. At the end of ten days the quack disappeared, but instructing

Mrs. U. to continue the application, which she did for a short time, long enough, however, to entirely destroy nearly the entire conjunctiva of the right upper lid, completely exposing the cartilage, which began to hypertrophy. This growth was soon very troublesome to the patient, bulging the lid and continually discharging. October 28 I removed the growth and relieved her of a great source of annoyance and anxiety. I know of two cases of incurable deafness from complete closure of Eustachian tube that this quack took as high as $25, with a positive promise of cure, which he proposed to accomplish by a few drops of olive oil in the ear twice a day, but this was innocent and quite harmless amusement.

Case VII—Fibrous Polypus.—Mrs. H., aged thirty-seven. On the evening of January 29, 1880, I was called in great haste to see Mrs. H., whom I found nearly collapsed from uterine hemorrhage. I immediately examined her per vaginam. Vagina full of clots and os open as large as a silver quarter, with a round, solid body, presenting during the absence of uterine contraction. I succeeded in getting my finger beyond the presenting body far enough to recognize its character, which I decided to be a fibroid. The hemorrhage was so profuse and the patient so weak that I at once administered ergot and tamponed. The hemorrhage was soon under control. I then proceeded to get the following history: Menstruation made its first appearance when the patient was twelve years of age. Has been very regular as to time ever since, but from the first has suffered severe pain and profuse menorrhagia; discharges and pain making their appearance at the same time, pain lasting from six to eight hours. She has had six children, and in labor as in menstruation the pain was invariably located to the left of the median line and just above upper margin of pubis. Has never complained of pain in her back or thighs, neither has she suffered from leucorrhœa. At her last confinement she was delivered of twins, neither of which were perfectly developed; one had a well formed body but minus a head and one arm; a tuft of hair grew from one shoulder. The other was malformed, but I could not learn in just what respect. This confinement occurred in November, 1878. On the morning of January 30, 1880, I called; removed the tampon, and was pleased to find tumor occupying vagina, the os firmly contracted upon pedicle; the tumor had commenced to soften. After considerable hard work I succeeded in getting my finger at the attachment of the pedicle, which was just above the internal os, on the left side. By twisting the pedicle and the assistance of my finger nail I succeeded in delivering the mass, which was as large as a turkey egg, with a decided fibrous structure. Patient says she suffered as much pain during the afternoon and evening as she ever did in a confinement. It has been nearly a year since, and she tells me she has been unwell regularly and suffered but little pain. Discharges normal as to quantity and duration. I am inclined to believe this tumor was the cause of the arrest of development of her twins, as well as painful and excessive menstruation.

Case VIII—Inflammation of the Fore-arm caused by cessation of Menstruation.—Mrs. R., aged forty-three. I first saw this patient in October, 1879. She was complaining of severe pain in the left fore-arm, which was intensely red and badly swollen. She informed me she had had this trouble on two occasions before, but after eight or ten days it subsided. In this instance it was more persistent. I ascertained she was irregular with menstrual functions, running two and three months with no show, and when it did make its appearance it was very scant and short in its duration. She was not anæmic, but in apparent good health. She had poulticed the arm for several days, and was taking iron. I immediately wet cupped her above the pubis with slight benefit. Trouble in fore-arm gradually disappeared, but in just a month the pain and swelling again appeared in same locality. I introduced speculum into vagina and scarified the os. This produced the most satisfactory result. The discharges came on free and continued for five days, the pain and swelling of fore-arm immediately disappeared, and for the following ten months she continued regular, with no trouble. Last month she again complained a little. Syr. ferri iodidum brought on the discharges with complete relief.

A CASE OF CORPULENCY REDUCED BY LOW DIET.

BY O. B. CAMPBELL, M. D., OVID, MICHIGAN.

On August 9, 1880, I was consulted by Mr. J. M., concerning a pain in the limbs and embarrassed respiration upon taking the slightest exercise. Upon an examination I found the limbs swollen, pitting deeply upon pressure, with a slight varicose condition of the veins, and the urine containing traces of sugar. The patient also stated that his original weight had been about one hundred and eighty pounds, but that in the last few years he had taken on flesh rapidly, and now weighed three hundred and four and a quarter pounds. Being convinced that an excessive formation of adipose tissue was the cause of all his trouble, I informed the patient that the important thing in his treatment consisted in the reduction of his corpulency. He replied that he had taken various anti-fat preparations in the past and gained rapidly in flesh during the time, and consequenly had given up all hope of ever having his weight reduced.

I then directed him to apply a pair of elastic bandages to his limbs, and placed him upon a low nitrogenous diet (as recommended by Dr. Vaughan*), consisting of gluten bread, beef, eggs, tea and coffee without sugar, radishes and cabbage, etcetera, and insisted on a minimum of food being taken, and a saline cathartic administered at night. Patient reported August 16th, just seven days from beginning of treatment, and had lost fourteen and a quarter pounds, being a little over two pounds a day, his weight now being two hundred and ninety pounds. (The diet during this time consisted of gluten bread and beef). Fearing I might injure the patient by surcharging the blood too rapidly with nitrogenous waste material, I allowed him to use moderate quantities of sweet apple sauce, in connection with his other diet, and on August 23 found he had lost six pounds, weight now being two hundred and eighty-four. From this time the diet was continued on essentially the same plan, with exception of the sauce, until November 9, when his weight was reduced to two hundred and fifty-six pounds, being a total reduction of forty-eight and a quarter pounds in three months, or a little over one-half pound a day for the entire time.

So far as I know this case far excels any previously reported in regard to rapidity of reduction. With the diminution of flesh all the symptoms previously complained of disappeared rapidly, and at the present time the patient has dispensed with his bandages entirely, the sugar has disappeared from the urine, and he is able to perform manual labor without inconvenience.

EDITORIAL BRIEFS.

OUR JOURNAL.—THE PHYSICIAN AND SURGEON has again come around to its birthday and it takes this occasion to thank its friends and patrons for their many past favors, and to express the hope that it will continue worthy of their esteem. Last January we appealed to our subscribers to help us with articles, reports of cases, etc., as well as by the prompt payment of subscription; this call has been nobly responded to. Our list of contributors of original articles and correspondents has increased from thirty-nine in 1879 to fifty-nine in 1880. Let us do even better in 1881. We hope that *all* will pay up the subscription promptly. It is not right, it is not honest to neglect doing so. Whatever the faults of the journal, the publisher has always done his part well, and this number appears in new type throughout. All these improvements cost money, so please pay up subscriptions promptly.

WE regret exceedingly that the *Obstetrical Journal of Great Britain and Ireland*, is to be discontinued with the close of the present volume. The publisher informs us that this step is necessary from the lack of support of the journal by the profession in Great Britain. The profession in America has done more in the way of support for the journal than their brethern in England have done. We think it a sad commentary on the profession in Great Britain when such a journal must be discontinued from want of support. We do better than that by the *American Journal of Obstetrics*, notwithstanding such an article as the one on "Impregnation from Imperfect Intercourse," (April, 1879).

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*THE PHYSICIAN AND SURGEON, July, 1879.

SUNNYSIDE MEDICAL RETREAT.—This institution, which has been in successful operation now for about five years, has been moved to Tarrytown, New York, a much more desirable location than the old one. The results with dipsomania, when the patients have entered the Retreat voluntarily with a desire to be cured, have been quite satisfactory. The same can be said of the results in the treatment of the opium habit. During the past year three quite remarkable cases have been reported from this institution. One of hystero-epilepsy, where the patient had undergone Battey's operation without benefit, another of blindness from cerebro-spinal meningitis, and a third of paralysis agitans, which appears in the *Journal of Nervous and Mental Diseases.*

DYING FOR THEIR PATIENTS.—In the Spring of 1877, Dr. Hutchinson of Brooklyn, a young physician of promise, son of a well-known surgeon, lost his life in an endeavor to suck from the tracheotomy tube a portion of diphtheritic membrane which was obstructing it and which threatened his patient's life. The infectious particles from his patient's throat passed into his own system, and in a few days he died.

Quite recently, (December, 1880) in the same city, another promising young man, Dr. Wilbur F. Sanford, in almost precisely the same way, became infected and died. It is a feeling of the highest and noblest kind, which will prompt a young man, while all before him is bright and full of promise, to lay down his life for a dying child. All honor to the men who will risk so much, and losing the present life, gain immortal names, and bring honor and glory to the profession to which they belong.

DIPHTHERIA.—This disease is now prevailing with fearful violence in many parts of the country. No section seems to be exempt. The populous city and the country village, are alike sufferers from the scourge. Winter's cold has no effect to abate its ravages, but rather it is a winter disease. In view of its alarming prevalence and fatality, and the fact that its nature and cause are shrouded in obscurity, scientific and truth loving physicians should lose no time or opportunity in investigating its origin and cause in his own locality. The tabulated results of many observers may show important facts, now not recognized. Brooklyn has for several years suffered severely from diphtheria. During the present season the fatality has amounted to about thirty-five per cent. of all the cases reported. What is the cause? What the remedy? The practitioner or student who will discover a preventative or remedy for the disease will immortalize his name, and be honored in thousands of homes in every land.

QUACKERY IN INDIANA.—A prominent druggist, graduate of Pharmacy department, University of Michigan, in Wabash, Indiana, recently informed the writer that in that State, anyone who can read is entitled to practice medicine, and that there are many practitioners in the State *who cannot read intelligently*. He specially mentioned one man located about ten miles from Wabash, *whose prescriptions he can almost always find in Dr. Chase's Family Receipt Book*. Is it not time for the physicians and people of Indiana to demand a law driving these men from practice or from the State.

THE NURSING BOTTLE IN 1825.—In examining the work of Dr. William P. Dewees, on the "Physical and Medical Treatment of Children," Philadelphia, 1825, I noticed that he recommends the use of a *heifer's teat*, as an appendage to the nursing bottle, from which the child may draw the milk. Some of the older readers of THE PHYSICIAN AND SURGEON doubtless remember when this article was in use, but the writer cannot recall that it was ever mentioned in lectures which he attended at three medical schools. It is now brought to the attention of the profession as worthy of trial in those cases in which the child will not thrive while nursing from the bottle, and yet a wet nurse is not attainable. The heifer's teat is not objectionable from the presence of any chemicals, such as the rubber teat contains, and which are doubtless to some children injurious.

Dr. Dewees says that the teat should be obtained from those who are experienced in its preparation, but I suppose any one could, with a little trouble, learn how to manipulate it that it would work properly. It should be preserved in dilute alcohol, and in the intervals of its use, should be left in a vessel containing water and a little whiskey, but before using should be washed to remove all the stimulant. It is not likely that the heifer's teat will ever again come into extensive use, but there may be cases where it may prove of value. G.

SEXUAL NEUROTIC CONDITIONS.—Just one year ago, in the January, 1880, number of this journal, Dr. E. B. Stevens, editor of the *Obstetric Gazette*, had an article upon this subject. Dr. Stevens informs us in the paper that in a few cases of too frequent seminal emissions he had used the following treatment with considerable satisfaction: "The supposed time of seminal emission was anticipated by using at each bed-time a suppository in the rectum, containing one-fortieth grain atropia sulphate, and during the interval I have directed the following:

℞. Bro. pot.	ʒiij.
Fluid. ext. bell.	ʒj.
Phosph. acid dilut.	℥vj.
Water and syrup ad.	℥vj.

Mix and give a dessert spoonful at 10 A. M., 3 P. M., and at bed-time."

Since last January I have had the opportunity of using this prescription for the purpose above indicated in four cases and with satisfaction in every case. Two of the cases were marked, while the other two were slight. The first two patients had been troubled for some years and had been the victims of quacks, who had extorted money from the patients by magnifying their troubles. My first endeavor was to remove from their minds the exaggerated impressions made by the quacks, then I advised that the parts should be kept clean and should be washed every night, just before retiring, with cold water; at the same time Dr. Stevens' directions were followed. The result has corresponded exactly with the statement of Dr. Stevens who says: "This plan has lessened the frequency of pollutions, and more particularly, it has relieved almost entirely the headache and mental and physical lassitude, thus converting what Curschmann regards as a grave manifestation—an abnormal seminal loss—into a form not uncommon with healthy men and not requiring interference."

It may be of interest that one of these patients (the one who had suffered most from quackery) was taking one drachm of tincture of cantharides three times a day when he first came to me. This had produced slight cystitis which soon disappeared after discontinuing the cantharides.

The only inconvenience in following Dr. Stevens treatment was dilatation of the pupils, in some cases preventing reading for a short time.

V. C. V.

MEDICAL NEWS.

Dr. Yoons disguises the taste of Epsom salts by using the following prescription:

℞. Magnesii sulphatis	20 grams.
Aquæ puræ	40 grams.
Aquæ menthæ piperitæ	3 drops. M.

Two cases of Addison's disease are reported in the *Medical Times and Gazette*, of November 27. In both cases there was rapid wasting. The conjuctivæ were pearly white. The supra renal capsules were found on postmortem to have undergone caseous degeneration.

For pruritis vulvæ the following is recommended by good authority:

℞.	Pulveris acaciæ	ʒ ij.
	Balsam Peru	ʒ j.
	Ol. amygd	ʒ jss.
	Aq. rosæ	℥ j. M.

This is to be applied eight or ten times a day to the itching part with a camel's hair brush. This same application is good in case of sore nipples.

Aconitia.—This alkaloid has not been used much by American physicians, we believe; all hesitating to use a drug so poisonous and one whose strength could not positively be determined. From these facts American physicians have confined their use of aconite to the tincture and other weaker preparations. In doing this the profession has acted wisely; for several cases of poisoning from the alkaloid have come to us from France and Germany. One one-hundredth of a grain seems to have been sufficient to produce toxic symptoms.

Dr. Althaus reports (*Medical Times and Gazette*) a case of diabetes insipidus successfully treated by one application of the constant voltaic current to the medulla. The battery used was one of fifteen cells, and care was taken that the medulla should receive alternately the influence of the anode and cathode, the degree of the voltaic power being governed by the rheostat. The application lasted six minutes and was altogether painless. The daily amount of urine was reduced from ninety to thirty ounces.

Resorcin.—This new antipyretic and antiseptic is now attracting considerable attention. The fullest account of its properties and uses yet published in the English language is that in the November number of this journal from our Russian translator. *Hydrochinon* is an allied substance, closely resembling resorcin in its physiological action, but having still greater antipyretic effect. Larger doses than .2 gram cause excitement like that produced by resorcin, and like the latter its antipyretic effect is of brief duration. It is not irritating and may be injected subcutaneously.

Sulphuretted Hydrogen and Free Ammonia in Urine.—Dr. Cameron (*London Lancet*) reports a case in which free hydrogen sulphide was found in the urine for a period of two years. The amount was determined on two occasions and was found to be 1.4 and 1.9 cubic centimeters per liter of urine. This is about the amount found in weak sulphuretted waters. The gas was present and could be recognized by the odor and by chemical tests as soon as the urine was passed. Unfortunately the reaction of the urine was not given; but on the disappearance of the odor of hydrogen sulphide, that of ammonia was detected, and this continued to be present also for two years, when it disappeared. The treatment is not given. Most probably this was a case of cystinuria with partial decomposition of cystin in the bladder.

WE are informed by a trustworthy correspondent that two years ago, a man (or rather a beast in human form) hung out his shingle to practice medicine in Pontiac, Michigan, and frequently told his lady patients that sexual intercourse was their only hope of cure. He soon left Pontiac, removing to Jackson, where he has an office at the expense of the State. Is it not time that Michigan had a law regulating the practice of medicine? The same correspondent informs us that he recently met in the mining district of this State a quack, who claimed that he could heal ulcers by charming them, or as the quack put it, "charm off ulsters."

THE TREATMENT OF ASTHMA BY THE INDUCED CURRENT.—Dr. Yeo reports (*London Lancet*) a case of asthma which was cured by another physician by means of the induced current. The patient, a gentleman of about forty years, had suffered from the paroxysms for more than six years. He had tried various remedies and visited various climates. The glavanic current was applied to the throat in the region of the great nerve trunks, the vagus and sympathetic, each pole being applied just below the angle of the jaw, and in front of the sterno-cleido-mastoid. The current, mild at first, is gradually increased in intensity until it can be distinctly appreciated by the patient as passing through the soft palate from one side of the throat to the other. It is continued for fifteen minutes at each sitting. The pupils, at first widely dilated, became strongly contracted as soon as the application gave relief. In this case twelve applications—two a day for six days—were made and produced a cure. The constant current is without effect in such cases. Max Schæffer, who has also used this method with success, first carefully examines the nose and throat and applies the electrodes according to the seat of the disease. He states that in the most severe cases it has acted "like witchcraft."

CASCA BARK VERSUS DIGITALIS.—In the Gulstonian lectures of 1877, Dr. T. Lauder Brunton pointed out the close resemblance in the physiological action of cortex erythrophlœi and digitalis. Casca strengthens and slows the heart and increases the amount of urine. Dr. Drummond (*London Lancet*) who has been using the tinctura erythrophlœi (as it is proposed to call the drug) for two years, sums up his experience as follows: "It (casca) is undoubtedly a very useful addition to our somewhat restricted list of therapeutic agents in the treatment of cardiac disease, serving like digitalis, to lower the pulse rate, and, whilst increasing the force of the systole, to render the heart more regular. In comparing the two drugs, whilst recognizing the value of casca, I think digitalis is the more reliable remedy of the two; it seems to act more rapidly and with more certainty. It may, however, yet be found that the cases in which each drug is to be employed must be selected; some cases requiring perhaps stimulation of the cardio-inhibitory center in the medulla—casca—whilst others may be best suited by a remedy which acts on the peripheral inhibitory apparatus in the heart—digitalis.

PROFESSOR BROWN-SEQUARD has hit upon a novel and interesting physiological experiment, the ease of the application of which will probably lead to its frequent demonstration. We quote as follows: "If we pour chloroform rapidly on the shoulder of a guinea pig, a reflex contraction of the platysma myoides and subjacent muscles immediately appears; the animal at first tries to escape, but in a short time its respiration diminishes, its temperature descends, it staggers and becomes torpid. It allows itself to be placed on the side or the back without attempting to reassume a normal attitude; and then it falls almost suddenly into a state of anæthesia, which may last for several hours, during which sensibility may disappear absolutely—the animal remaining inert in a state of the most complete resolution, resembling that of anæsthetic sleep. If we operate on a young cat the result is quite striking. It is well known that this animal is difficult to anæsthetize by chloroform, and that in a few minutes after the cessation of inspiration it wakes up during a period of agitation somewhat alarming to those exposed to the attacks of the claws of the now furious animal. We can readily understand, therefore, the natural astonishment produced at the Biological Society, where any one might handle a young cat which the local application of chloroform, practiced an hour previously, had plunged into such a sleep that the most vigorous pinching did not elicit any movement demonstrating the existence of sensibility. This condition, resembling shock or the state of syncope following severe injuries or profound drunkness, persisted in this animal for several hours, there being scarcely observable, from time to time, some automatic movements of the paws, seeming to announce an approaching awakening."—*Gaz. Hebd.—Medical Times and Gazette.*

THE SOUTHERN MICHIGAN MEDICAL SOCIETY.—At a recent meeting of this society (December 15) Dr. Morden offered the following resolutions which were adopted:

WHEREAS, We believe that the people of this State are in need of some suitable law to regulate medical practice, similar to the laws that have been enacted (and found to be both useful and necessary) in nearly all other civilized States and countries in the world; and

WHEREAS, we believe that the time has now fully come, when our legislature should give the matter the consideration that is its due; therefore,

Resolved, That we will individually use our influence with State representatives and State senators, from our several localities, to secure the passage of a "medical act," that will provide:

(1) For the examination, by a State Board of Examiners, of all persons who are to begin the practice of medicine in this State;

(2) For the annual registration of all persons practicing medicine in this State; and

(3) For the fixing of proper penalties for the violations of the provisions of the "Act."

And further, we would recommend that there be one general examination of all applicants, or candidates, which shall be restricted to questions of demonstrable knowledge, as distinguished from questions of mere opinion; and that there also be a special examination of each candidate, after the general examination, which shall pertain to therapeutics, or the "*modus operandi* of drugs," and that at these separate and special examinations, each candidate shall be examined, only by physicians who belong to the school, or kind of practice, for which the applicant shall (after his general examination) signify his preference.

Thus we recommend, that all such legislation should be in the interests of the people, solely, to guard them against the evils of quackery and ignorance, and that no legislation should be permitted that would bestow special privileges on physicians, as a class; or on any one class or school of medical practitioners, in preference to others.

The following were appointed delegates to the meeting of the National Medical Association in Richmond next May: Drs. A. R. Smart, Charles Rynd, J. H. Bennett, E. H. Rorick, J. L. Haggerty and M. R. Morden. The President and Secretary were empowered to accredit alternates re-elected by the delegates.

Dr. Rynd referred to the fact that the University hospital is open to everybody, and that hundreds of people in good circumstances go there as public charges for treatment, involving much expense to the people, and made a motion as the sense of the meeting that a system of charges in the case of persons abundantly able to pay should be instituted, for the benefit of the tax-payers and the over-worked medical faculty, but without action the association adjourned.—*Adrian Times.*

CORRESPONDENCE.

A REGION SUFFERING FROM QUACKERY.

EDITOR OF THE PHYSICIAN AND SURGEON: *Dear Sir*—This city and the country around presents numerous instances of persons who have suffered injury at the hands of quacks. In addition to the two cases previously reported by me and the three by Dr. Padfield, many others might be given. Only last night I was called to see a lady, who, in stating the history of her case, related that she had been kept in labor (probably part of the time with false pains) while attended by one of these charlatans, from Tuesday until Saturday. The pseudo doctor in his manipulations had used such violence as to rupture the uterine walls. Such a case hardly seems possible, and yet instances of as gross malpractice by these pretenders, have forced themselves upon the attention of every practitioner. Another case is reported of a charlatan who employed a pair of forceps and drew a woman all around the room. The quack of whom the above is related, is also said to be in the habit of using the forceps in cases where they are unnecessary in order to increase his charges. A case of bilious fever recently came into my hands which had been previously seen and diagnosed as typhoid. The family had also been informed that the disease would run its course of from nine to twenty-one days, and could not be broken up by medication. Nevertheless a few good solid doses of quinine cut it short within twenty-four hours after my first visit to the patient. During the past summer I was called to see an estimable lady who had been treated for about six weeks by one of these self-styled doctors. I found her with enlarged thyroid and lymphatics of the neck, slightly projecting eye-balls, labored respiration, caked breast, obstinately constipated bowels, and heart beating at the rate of one hundred and forty per minute. Recognizing the condition as one of debility or exhaustion, due to a scrofulous diathesis with the thyro-cardiac disorder, often called ex-ophthalmic goitre, the heart's action was controlled by means of veratrum viride and cactus grandiflorus, the bowels opened by aperients, sleep induced by suitable soporifics, and the woman put upon the officinal elixir pyrophosphate of iron, quinine and strychnine as a tonic, and the iodobromide of calcium as an alterative. Improvement was soon manifested by better sleep, increased appetite, less difficulty in respiration, and a gain of strength. After two weeks she was able to walk across the house and sat for some time out upon the porch, in fact, she had reached that stage where I said to some of her neighbors that I considered her out of danger. At this period an *old* charlatan gained access to the house under the plea of a neighborly visit and in some way induced the transfer of the case to his hands. Rumor says that the means employed was deliberate falsehoods about me, such as representing that I had simply been treating the case under his directions, and promising a complete cure in two weeks. The result was that under wet packing and treating for torpid liver rather than the real disease, the woman soon began to fail and in ten days slept with her fathers.

Such cases are few that are known, but many that are covered by the grave. Who is responsible for their blood? Evidently not altogether the people who are misled by such dishonesty, and are unable to distinguish between the true physician and the pretender: rather it is the State that is derelict in its duty of protecting its citizens and allows them to be preyed upon by these vultures or parasites in human form. Let us all hope that the day is not distant when by appropriate legislation, our State shall be purged and cleansed from these scourges to humanity and blots upon our civilization.

Very truly yours, W. H. SMITH, M. D.

SAINT CLAIR, MICHIGAN, December 4, 1880.

IS IT RIGHT?

EDITOR OF THE PHYSICIAN AND SURGEON: Is it right for the medical man to be obliged to let his bills run longer than any other business man? The necessity grows out of the fact that the old practitioners allow their bills to run for an almost unlimited time; thus subjecting the young practitioner to the necessity of letting his bills run thus, which is very detrimental to him.

I hear people saying almost every day, Dr. So-and-So is a very nice doctor. He never hurries me for his bill, if it runs five years. It seems to me that the custom of letting people pay their doctor's bills last of all bills should not be allowed by members of medical societies. It has got to be that the doctor who insists on getting his pay in a reasonable time after his work is done is considered a cut-throat, and everything but a gentleman. Who does it? you ask. Is it not the practitioner? Surely it is; but it is not one, but all of them, or rather the class of them. Then let us as a profession have a definite time within which limits we must have our pay. There is a class who never try to pay their bills. It is this class I refer to, not to the worthy poor for whom we may choose to do gratuitous work.

It seems to me that the "American Code of Medical Ethics" should consider it a misdemeanor for a physician to let his bills run to such great length (no matter if he be an old physician and can afford it) at the expense of the young in practice.

Yours, etc., ———

AN EXTREME OLD AGE.

EDITOR OF THE PHYSICIAN AND SURGEON: *Dear Sir*—Thinking that the following note of a person reaching an extreme old age, may be of some interest, I send it to you. In the majority of such cases the exact age is not known; for this reason the record of this case renders it more valuable. Mrs. Thomas Burnes, of Portland, Maine, died in April 1879: (I think on the 10th of April) she was born April 15, 1766, consequently she lived to be about one hundred and thirteen years old. The record in the Bible shows that she married Thomas Burnes at Bristol, Maine, April 16, 1784, she being then eighteen years of age. Her maiden name was Susan Bailey, and she was born at Woolwich, England. She was the mother of twelve children, only two daughters of this number are now living. Mrs. Betsey Kirkpatrick of Rockland, Maine, is a neice of Mrs. Burnes. She is eighty-nine years of age and in excellent health. She is the mother of fourteen children, twelve of whom are now living, and she has forty-nine grand children and fifty-two great grand-children. C. C. KIRKPATRICK.

ADRIAN, MICHIGAN.

A QUACK'S PRESCRIPTION.

DR. VAUGHAN: The following is a *verbatim* copy of a prescription written by a doctor (?) who practices without a diploma. A failure to appreciate its virtues may be owing to the fact that the patient refused to take the medicine. It was prescribed for my brother who was suffering from inflammatory rheumatism. This quack began as a horse-doctor and failing to make a living by dosing quadrupeds, he tried his hand with a more credulous animal—bipeds. D. W. MOTT.

℞.	Oil Sassafras	oz. 1
	Tinct. Cayenne	oz. 1
	Spts. Hartshorn	oz. 1
	Oil Penroyal	oz. 1
	Laudanum	oz. 2
	Gum Camphor	oz. 1
	Gum Myrrh	oz. 2
	Oil Oraganum	oz. 1
	Oil Lin Seed	oz. 1
	Oil Amber	oz. 1
	Spts. Turpentine	oz. 1
	Alcohol	1 Gill
	Oil Peppermint	oz. 1
	Oil Cedar	oz. 1
	Oil Juniper	oz. 1

Dose from 8, 12 drops three times a day. Rub it on also. Put in a little more alcohol if the gill does not *cut* it, but put in only a little.

J—— W——

TRANSLATIONS.

Translations from Russian Journals for THE PHYSICIAN AND SURGEON.

BY RALPH D'ARY, M. D., ROMEO, MICHIGAN.

CYANOSIS OF MALARIAL ORIGIN.

Dr. Yasvitsky writes: I was consulted by a soldier lately dismissed from service in the Caucasus. He complains of severe, dull, oppressive headache, general discomfort, weakness, a bruised feeling in the whole body, and some thirst. All these symptoms appeared after two attacks of eclampsia, with loss of consciousness for half an hour. The second attack had occurred two days after the first; both were followed by abundant perspiration. After the first attack his lips and eyelids became colored blue, and the coloring increased considerably after the second. Previously the patient had always been well; had not had epilepsy or syphilis, but during his service in the Caucasus he had almost constantly had intermittent fever. Stat. praes.: The patient is of medium height, pretty well made, twenty-eight years old. The skin is flaccid and covered with a sticky exudation of unpleasant odor. The skin looks as if it were painted blue, from the forehead to the middle of the trunk. The transition into the natural color of the lower half of the body is gradual; in the knees a slight bluish tinge is still noticeable. The perspiration collected on clean white cloths and blotting paper does not possess the blue color. The mucous membrane lining the cavities of the nose, mouth and pharynx, is a deep blue. Even the teeth and the ocular albuginea show a bluish tinge. The pupils are slightly enlarged but react well to the light. The temperature is normal, the pulse small and hard, eighty per minute. The thoracic and abdominal organs were carefully examined, also the large blood vessels and lymphatic glands, but nothing abnormal was found except a slight enlargement of the spleen. The urine contained neither albumen nor sugar.

For two weeks the patient took:

R. Potassii iodidi,	
Potassii bromid	āā ʒi.
Aquæ destil	℥i.

Dose, forty drops twice a day.

But when I noticed that he had slight paroxysms of fever every third day about noon, I prescribed:

R. Acidi muriat. dil	ʒj.
Quiniæ sulph	℈ij.
Potass. iodidi	ʒss.
Aquæ destill	℥ss.

S. Thirty drops twice a day.

The patient soon recovered and the cyanosis disappeared. Considering the enlargement of the spleen, the regular paroxysms of the fever, and the promptness of the cure effected by quinine, we have a right to conclude that the cyanosis was of malarial origin. This diagnosis is still further confirmed by the circumstance that during the intermissions the coloration was considerably less vivid.—*Med. Obozr.*

TREATMENT OF DYSENTERY.

Dr. Enco communicates to the *Med. Obozr.* the following plan of treatment, which he claims to have followed during the ten years of his medical service in the Alexandrine School* and Widows' Home, (as well as in private practice) and which had been successful in most of the cases treated—over 500.

When dysentery has been diagnosed the patient is given a tablespoonful of castor oil, which in most cases, though not always, produces abundant fecal stools; sometimes, in lighter cases, the tenesemus ceases and constipation takes place, but on the second or third day normal defecation is reestablished. If, however, after the first abundant defecation, there should reappear small muco-sanguineous discharges with tenesemus, the patient is given two injections, with an interval of two hours between. The injections consist either of acid muriat. dil. one-half drachm to water one pint, (*i. e.*, 0.1 per cent. HCl) or of argenti nitr. one grain to water one pint. They should be retained as long as possible. Stronger solutions instead of lessening the irritation of the bowel, only increase it, and he uses them only in chronic cases, and then only rarely. The quantity injected varies from four ounces to one and a half pint, according to the age and size of the patient, and the supposed seat of the irritation; when slight pressure in the region of the S. Romanum (sigmoid flexure) or colon descendens does not produce pain, a smaller injection is ordered; if it does, a larger. In most cases tenesmus ceases after the second, in exceptional cases after the first injection; frequently the second injection is retained, the discharges are arrested, and for two or three days defecation is normal. If the dysentery should reappear on the next day after the injections, they are given again in the same manner. If it reappeared again on the third day, castcr oil was given again, and it was very seldom that the necessity for clysters continued after the oil had operated.

When the tenesmus is violent and castor oil does not produce fecal stools, because it is unable to cause peristaltic motion

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*The Alexandrine School of Saint Petersburg is a Government institution for the education of young ladies of gentle birth, and in it *several thousand* pupils live from the age of seven to about eighteen or twenty, that is until they have successfully finished the curriculum of instruction.—*Translator.*

in the spasmodically contracted large intestine, he gives several drops of tinctura opii, and administers the injection after the tenesmus has moderated.

To prevent relapses, in graver cases, pills are given during one week or ten days, of argenti nitras, one-thirtieth, extract rhei aquos. one-half grain, alcoholic extract nucis vomicæ one-twelfth to one-eighth grain. One pill three times a day, and coarse food is withheld.

In a vast majority of recent cases (500) this treatment effected a cure in from two to four days; in a few cases from five to six days. In a few cases, less than ten per cent., this treatment has been unsuccessful. In those cases various other means were used with variable success, magist. bismuthi, rad. ipecac, calomel, salep, tincture coto, etc.

DIPHTHERIA.

There come from Russia warnings against the use of solutions of pepsin with muriatic acid for gargling in diphtheria. It is stated that the solution produces considerable irritation of the mucous membrane of the fauces, even before it dissolves the exudates, and therefore it prepares a new field for the bacteria, which easily attack these exposed surfaces.

THERAPY OF ULCERATION OF NAIL MATRIX.

After loss, from whatever cause, of the horny plate of the nail, the matrix presents a superficial ulcer, which, on healing should become covered with a new nail, growing forward from the groove in the skin. During the slow growth of the new nail the papillæ of the matrix often enlarge to such an extent that the plane of the matrix becomes abnormally elevated, in consequence of which the slow growing nail is unable to cover the hypertrophied papillæ, but cuts through them, producing ulceration and disintegration of the papillæ, or, in other words, a very painful, obstinate and foul ulcer of the matrix. These ulcers generally yield neither to warm poultices nor warm local baths, caustics, scraping or resection of the fold at the root, or even of the matrix itself. The cause of this intractability, in my opinion, is found in the purely mechanical irritation of the hypertrophied papillæ caused by the new nail. Therefore some surgeons advised, if possible, to retain the old nail, or if that be impossible, to substitute for it a wax plate. Since the above mentioned operative procedures are unsuccessful, and the wax plate, when warm, becomes too yielding, and therefore does not present sufficient resistance, I have in three cases of ulcerated nail matrix used a different nail surrogate.

The first case was that of a young girl, who for two months had had on her right index finger an ulcer that would not yield to treatment. I covered the matrix with a wax plate and the latter with a wooden one of a shape corresponding to the healthy nail on her other index. Both plates were kept in place by means of strips of sticking plaster; the ulcer was daily washed out with water or a solution of acetate plumbi. Two weeks later it was healed up, and a nail of pretty good shape had grown over it.

In the second case I used only a zinc plate of proper shape and curve. The ulcer healed in a few days, and in three weeks a nail of normal shape had grown.

The third case was an ulcer of a year's standing. After once cauterizing it with solid nitrate of silver, I applied a wax plate, which I covered with cardboard of corresponding shape. In less than a month the patient was well.—Dr. Varusky in *Med. Vestn.*

Dr. Sprimon, with reference to the above, takes occasion to remind the readers of his journal, the *Med. Obozrania*, that the application of the dry pulv. plumbi nitratis—a remedy recommended some time ago, has an excellent effect in obstinate ulceration of the nail matrix with fetid discharge.

TAPPING SYNOVIAL CAPSULES.

Dr. W. Orlof, in 1878, had communicated to the Saint Petersburg *Med. Wochenschrift*, the results of ten of these operations, either simple or in combination with injections of tincture of iodine. Since that time he has performed the same operation nine times. The following are the cases as taken from his later article in *Med. Obozrania*:

(1) Male, aged fifty, rather weakly subject. Chronic dropsy (of two years standing) of left knee. Through the canula were withdrawn two and one-half ounces of turbid, greyish, milky fluid with clots. Injected undiluted tincture iodine three drachms. No reaction, but no improvement, either.

(2) Female, aged sixteen. Dropsy of right knee. Tapping yielded two ounces of turbid yellow fluid. Injected: water three parts, tincture iodi (comp?) one part. Complete recovery.

(3) Male, aged twenty-six. Acute dropsy of left elbow: swelling, redness, pain; circumference thirty-three centimeters. Tapping yielded two ounces putrid pus, like washings of meat. The cavity was rinsed out with infusion of chamomile. No reaction; complete recovery.

(4) Male, aged forty. Hygroma of right knee. Tapping yielded one and one-half ounces of sanguineous synovial fluid. No injection. Recovery.

(5) Male, aged fifty. Putrid synovitis of left knee. Tapping yielded one and one-half ounces of pus. Injected tincture iodi and water. Three months and a half later the patient died.

(6) Female, aged thirty. Chronic synovitis (three years) of left knee. Yield: one ounce sanguineous synovia. Three weeks after the operation the patient could walk. No traces left of synovitis.

(7) N., aged twenty-seven. Synovitis of right knee. Tapped; no reaction; recovery.

(8) Male, aged forty. Fracture of left patella; traumatic synovitis; circumference forty centimeters. Yield: eleven drachms of sanguineous fluid. Complete recovery.

(9) Male, aged thirty-five. Hygroma of right elbow. Yield: one-half ounce of sanguineous fluid. Recovery.

In none of these cases did the tapping or injection produce any reaction. Anæsthetics had not been used. In almost all cases the results were favorable, and in some of the chronic cases, brilliant. In one case (only one out of nineteen) there followed no recovery, and in one (out of nineteen) there followed death after three and one-half months. The puncture was made with the common trocar with a fawcet.

Translations from Scandinavian Journals for The Physician and Surgeon.

BY J. S. JOHNSON, M. D., ORFORDVILLE, WISCONSIN.

TRUE PERIPHERAL NEUROGANGLIOMA.

BY PROFESSOR AXEL KEY, in *Hygiea*, 1879.

The patient was an adult male who was discharged from the hospital (Serafimerlazerett in Stockholm) two weeks after the extirpation. The tumor had begun as a small tubercle in the soft parts near the left ala of the nose, and grew in the course of one year to the size of a plum. It was encapsuled and had no connections whatever with the integument or bone; was of a grayish-red color, soft and smooth to the touch.

After hardening in Müller's fluid, the tumor became quite firm, and appeared everywhere surrounded by a smooth membrane, except at one end, to which were attached some shreds of connective tissue. On inspection it appeared like a sarcoma, a diagnosis which was made in the clinic previous to extirpation. The microscope, however, showed it to be of an entirely different nature, being composed of very large cells, completely resembling ganglionic cells and enclosed in fully developed capsules whose insides had the same appearance as the investing sheaths of ganglionic cells. The cells were apolar and were found to the number of two or three or more in each capsule. In the connective tissue adhearing to the end of the tumor were found unequally bunched nerve fibres, most probably a branch of the infra-orbital. On examination of these nerve fibres, it was very plainly shown that the ganglionic elements of the tumor were developed directly from the nerve fibres.

Here then, was a true ganglioma, deciding a disputed question, as to whether such a tumor really ever occurs at the peripheral portions of a nerve. In medical literature, one case only is to be found described, namely: by Loretz, in *Virchow's Archives*, but the tumor was the size of an egg, was developed from a pre-existing ganglion and thus constituted a sort of hyperplastic new formation. But the above case proves that a ganglion can be developed from a peripheral nerve, independent of previous ganglionic structure, and to avoid confusion may be named Neuroganglioma vera peripherica

SOLUBILITY OF RENAL CALCULI IN BENZOATE OF LITHIUM AND BORO-CITRATE OF MAGNESIA OUTSIDE THE ORGANISM.

BY DR. MADSEN, in *Ugeskrift for Lager.*

Examinations made on two calculi, consisting principally of uric acid, showed that on pulverizing a portion of the first and treating it with a solution of boro-citrate of magnesia—one part of the salt to four of water—for six hours, 75.005 per cent. of one were dissolved, and of the second 57.55 per cent.; while benzoate of lithium of the same strength dissolved only 32.5 per cent. and 20.95 per cent., respectively, under the same conditions. In both cases the boro-citrate of magnesia dissolved over 36 per cent. more than the benzoate of lithium. A portion of the pulverized calculus was also treated with distilled water, by which were dissolved 9.8 per cent. and 6.15 per cent., respectively.

Lastly, the remaining solid portions were placed in a solution of boro-citrate of magnesia—one part of the salt to nineteen parts of water—over a water bath and kept at a temperature of 38° Centigrade. By this method 33.3 per cent. of the first stone were dissolved in one hundred and ninety-two hours, and when the stone was taken out the last time to be dried and weighed, nine milligrams scaled off the outside. The second stone lost in the one hundred and ninety-two hours, 24.09 per cent., and when removed from the solution fell into small pieces.

SECTIO CÆSAREA POSTMORTEM.

BY DR. WARFVINGE, in *Hygiea.*

The operation was performed on a woman who died at full term from cardiac disease. Labor had been in progress seven hours, the membranes had ruptured, the os uteri was fully dilated and the head already visible at the vulva, when death suddenly occurred. As no obstetric forceps were at hand, the Cæsarean section was performed. The fœtus showed no signs of life, but after half an hour's continued efforts at resuscitation, respiration was fully established and the child recovered. The author attributes the happy results to the particular method by which the artificial respiration was performed. While the child's tongue was held forwards by an assistant, he seized the child by its arms and lifted it up, then placed it down again in the sitting posture, at the same time that its arms were brought down, its elbows pressed against the ribs and the body bent forwards. This method was alternated with that of Schutz which did not, however, seem near so efficient.

IS TUBERCULOSIS INFECTIOUS?

From several cases cited by Dr. L. G. Bryhn, in *Norsk Magazi.* for Lagividuskab, we quote the following: A tuberculous man marries a woman of good constitution and family history; the man dies and his wife becomes tuberculous as well as her sister who was living with the family during the husband's illness. This sister afterwards married a perfectly healthy man of good family history, who shortly afterwards became diseased, as did also his neice, who lived with the family for some time. One of their children died from tuberculous meningitis, two more show symptoms of tuberculosis, and a fourth appears to be well. The woman who nursed the first mentioned man's wife during her illness, became tuberculous and died. She infected her sister who died from the same cause, while their parents lived to old age and there had never been any tuberculosis in the family. Dr. Bryhn reports several similar instances of what he indubitably considers infection, and says he could give others. He considers the disease to be "catching," especially in the advanced stages, and that this is quite as frequent a cause of disease as heredity. Is tuberculosis infectious?

UTERINE FIBROMYOMA WITH MENTAL DISTURBANCES.

BY P. A. BACKWELL, *Finska Lakaresalskaps Handl.*, Band XXI. Seida 301.

The patient, K. J. S., a married woman, first came under treatment November 5. Had been married thirteen years and had four children, of whom the youngest was nine years old. Three years ago menstruation became irregular, since which time she has been out of health and right mind. Complains of pains in the limbs, headache, neuralgia and anæmic symptoms. On examination the lips of the os uteri are found hypertrophied, the os far back, and the body of the organ wide and enlarged, particularly toward the left side. From the os there is a constant, dark-colored, sanious discharge, and a sound could be carried into the distance of 9.5 centimetres.

On the 9th the inside of the uterus was scraped out with a curette and a considerable amount of hypertrophied mucous villosities removed. The enlargement toward the left was again determined, and on the 16th the cervical canal was dilated, when a digital examination corroborated the diagnosis of a tumor with somewhat broad base. It was first attempted to remove it by means of the ecrasuer, but the loop could not be made to grasp it, so that enucleation was resorted to. The capsule was opened with scissors and the tumor turned out. After the operation the uterine cavity measured eleven centimeters. The tumor weighed 36.5 grams and consisted of connective tissue with a few smooth muscle fibers. The patient was placed on roborant treatment and her bodily and mental condition has been greatly improved.

SELECTED ABSTRACTS.

THE BIRTH-PLACE OF CHOLERA.

We take the following graphical description from a recent monograph by D. B. Simmons, M. D., Physician and Surgeon to the Ken Hospital, one of the physicians to the cholera lazaret, and Chairman of the Yokohama Foreign Board of Health:

Though the habits and customs of the native races of India have often been cited in connection with the present subject for the purpose of comparing them with those of other people, yet I will venture to restate them briefly here.

(1) *Drinking Water Supply.*—This is derived from (*a*) wells, (*b*) so-called "tanks" or artificial ponds, (*c*) the watercourses of the country.

- (*a*) The *wells* generally resemble those in other parts of Asia.
- (*b*) The *tanks* are excavations, often of considerable extent, made for the purpose of collecting the surface water during the rainy season and storing it up for the dry. Necessarily they are mere stagnant pools. The water is used not only to quench thirst, but is said to be drunk as a sacred duty. At the same time the reservoir serves as a large washing tub for clothes, no matter how dirty or in what way soiled, and for personal bathing and ablution.
- (*c*) The *watercourses.*—Many of these are sacred; notably the Ganges, a river one thousand six hundred miles long, in whose waters it is a religious duty for millions, not only of those living near its banks, but of pilgrims, to bathe and to cast their dead.

(2) *Disposal of the Night-soil.*—The Hindu cannot be made to use a latrine.* In the cities he digs a hole in his habitation;

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*The customs of the Hindus are very peculiar in some respects.

in the country he seeks the fields, the hill sides, the banks of streams or rivers, when obliged to obey the calls of nature. Hence it is that the vicinity of towns and the banks of the tanks and watercourses are reeking with filth of the worst description, which is of necessity washed into the public water supply with every rainfall. Add to this the misery of pilgrims, their poverty and disease, and their terrible crowding into the numerous towns which contain some temple or shrine the object of their devotion, and we can see how India has become and remains the hot-bed of cholera epidemic. In the United States official report on this disease (pages 683 *et seq.*), the horrors incident upon the pilgrimages are detailed with appalling minuteness. W. W. Hunter, in his *Orissa*, states that twenty-four high festivals take place annually at Juggernaut. At one of them, about Easter, forty thousand persons indulge in hemp and hahish to a shocking degree. For weeks before the "car festival" in June or July, pilgrims come trooping in by thousands every day. They are fed by the temple cooks to the number of ninety thousand. Over one hundred thousand men and women, many of them unaccustomed to work or exposure, tug and strain at the car till they drop exhausted and block the road with their bodies. During every month of the year a stream of devotees flows along the great Orissa road from Calcutta, and every village for three hundred miles has its pilgrim encampments. The people travel in small bands, which at the time of the great feasts actually touch each other. Five-sixths of the whole are females, and ninety-five per cent. travel on foot, many of them marching hundreds and even thousands of miles, a contingent having been drummed up from every town or village in India by one or other of the three thousand emissaries of the temple, who scour the country in all directions in search of dupes. When those pilgrims who have not died on the road arrive at their journey's end, emaciated, with feet bound up in rags and plastered with blood and dirt, they rush into the sacred tanks or the sea, and emerge to dress in clean garments. Disease and death make havoc with them during their stay; corpses are buried in holes scooped in the sands, and the hillocks are covered with bones and skulls washed from their shallow graves

It is calculated that one hundred and fifty million of them always defæcate on the ground. They have no privies or latrines, and even the native soldiers under British rule will not use them. A mutiny greater than that of 1857 might be produced if this necessary hygienic rule were enforced. Many thousands of tons of human excrement have thus been deposited upon the open ground for some thousands of years. Outside the large cities of India, the bulk of the people always dwell in villages of from two thousand to ten thousand inhabitants, and from five to less than twenty miles apart. The result has been the accumulation of enormous amounts of fæcal matter, with a corresponding degree of saturation of the soil, and the consequent extensive pollution of water in every direction.—*Cholera Epidemic of* 1873 *in United States*, page 685.

by the tropical rains. The temple kitchen has the monopoly of cooking for the multitude, and provides food, which, if fresh, is not unwholesome. Unhappily, it is presented before Juggernaut, so becoming too sacred for the minutest portion to be thrown away. Under the influence of the heat it soon undergoes putrefactive fermentation, and in forty-eight hours much of it is a loathsome mass unfit for human food. Yet it forms the chief sustenance of the pilgrims, and is the sole nourishment of thousands of beggars. Some one eats it to the very last grain. Injurious to the robust, it is deadly to the weak and wayworn, at least half of whom reach the place suffering under some form of bowel complaint. Badly as they are fed, the poor wretches are worse lodged. Those who have the temporary shelter of four walls are housed in hovels built upon mud platforms about four feet high, in the centre of each of which is the hole which receives the ordure of the household, and round which the inmates eat and sleep. The platforms are covered with small cells without any windows or other apertures for ventilation, and in these caves the pilgrims are packed, in a country where, during seven months out of the twelve, the thermometer marks from 85° to 105° Fahrenheit. Hunter says that the scenes of agony and suffocation enacted in these hideous dens baffle description. In some of the best of them, thirteen feet long by ten broad and six and a half high, as many as eighty persons pass the night. It is not, then, surprising to learn that the stench is overpowering and the heat like that of an oven. Of three hundred thousand who visit Juggernaut in one season, ninety thousand are often packed together for a week in five thousand of these lodgings. In certain seasons, however, the devotees can and do sleep in the open air, camping out in regiments and battalions, covered only with the same meagre cotton garment that clothes them by day. The heavy dews are unhealthy enough; but the great festival falls at the beginning of the rains, when the water tumbles in solid sheets. Then lanes and alleys are converted into torrents or stinking canals, and the pilgrims are driven into the vile tenements. Cholera *invariably* breaks out. Living and dead are huddled together, under a leaking roof, above a reeking cesspool, and with no more space to lie on than they can cover. In the numerous so-called corpse fields around the town as many as forty or fifty bodies are seen at a time, and vultures sit and dogs lounge lazily about gorged with human flesh. In fact, there is no end to the recurrence of incidents of misery and humiliation, the horrors of which, says the Bishop of Calcutta, are unutterable; but which are eclipsed by those of the return journey. Plundered by priests, fleeced by landlords, the surviving victims reel homeward, staggering under their burdens of putrid holy food wrapped up in dirty cloths, or packed in heavy baskets or earthenware jars. Every stream is flooded; and the travellers have often to sit for days in the rain on the bank of a river before a boat will venture to cross. At all these points the corpses lie thickly strewn around —an English traveller counted forty close to one ferry—which accounts for the prevalence of cholera on the banks of brooks, streams and rivers. Some poor creatures drop and die by the way; others crowd into the villages and halting places on the road, where those who gain admittance cram the lodging places to overflowing, and thousands pass the night in the streets, and find no cover from the drenching storms. Groups are huddled under the trees; long lines are stretched among the carts and bullocks on the roadside, their hair saturated with the mud on which they lie; hundreds sit on the wet grass, not daring to lie down, and rocking themselves to a monotonous chant through the long hours of the dreary night. It is impossible to compute the slaughter of this one pilgrimage. Bishop Wilson estimates it at not less than fifty thousand. And this description might be used for all the great Indian pilgrimages, of which there are probably a dozen annually, to say nothing of the hundreds of smaller shrines scattered through the peninsula, each of which attracts its minor hordes of credulous votaries. So that cholera has abundant opportunities for spreading over the whole of Hindustan every year by many huge armies of filthy pilgrims; and the country itself well deserves the reputation it universally possesses of being the birth-place and settled home of the malady.

EXTRACT OF MALT.

Notwithstanding the Trommer extract of Malt Company brought extract of malt to the notice of the medical profession of his country more than six years ago, we were first induced to make therapeutic test of its virtues by reading in Ziemssen's Cyclopedia, the able article by Immerman, wherein he states that after prolonged experience at the Basle Hospital, Malt Extract had almost entirely taken the place of Cod Liver Oil. In the first serials of trials made by us we obtained very satisfactory results, and we do but simple justice to the merits of this most important of recent additions to therapeutics when we say that continued and varied experience of the use of Malt Extract has resulted in our still higher appreciation of its peculiarly valuable and beneficial properties. Indeed our experience with this preparation has been uniformly successful, failure occurring in no single instance.

The statement in Stille & Maisch's Dispensatory that it "appears to be especially adapted to promote the digestion of amylaceous food by promoting its conversion into dextrine and glucose," and that it is "found quite beneficial in states of chronic debility, *dyspepsia* due to organic disease or infirmity, or to mere nervous exhaustion" is but a brief recital of an exceedingly limited and partial range of its many valuable therapeutic properties. In weak digestion, in debility, in malnutrition, in functional derangement of the stomach and bowels of both adults and children, in the emaciation following the diarrhœa of teething infants, in all wasting diseases of children, in general depreciation accompanying ovarian disease, in any wasting diseases of females, in profuse suppuration following wounds, injuries and the major operations of surgery; and last but not not least, in tuberculosis and scrofulosis, and in convalescense from fevers and other acute diseases, the Trommer Extract of Malt has time and again practically and unquestionably been demonstrated to be of incalculable value. In cases of phthisis that would not tolerate cod liver oil in any of the usual forms of administration, the Extract of Malt alone, or forming an emulsion with the oil that was acceptable, has an intrinsic value that cannot be calculated.

The Trommer Extract of Malt Company at Fremont, Ohio, is employed in the *exclusive manufacture* of the "plain" Malt Extract. or combined with such other preparations as Cod Liver Oil, Iron, Phosphorus, Pepsin, Quinine, the Hypophosphites, etc., as have been suggested and approved by some of the most eminent and reliable members of the profession in Europe and America; and notwithstanding the large and steadily increasing demand, they are enabled, by unremitting personal attention to all the details of the manufacture, to maintain the excellent quality and high standard which has established the reputation of their preparations on both sides of the Atlantic. One peculiarly valuable property of their preparation is that it will keep for years in any climate without fermenting or moulding.—*Southern Practitioner.*

BOOK REVIEWS.

THE ART OF PROLONGING LIFE. By Christopher William Hufeland. Edited by Erasmus Wilson, M. D., author of "A Treatise of Human Anatomy," etc. From the last London edition. Philadelphia: Lindsay & Blakiston, 1880.

We remember reading this work some twenty years ago, in its original language—German. The translation before us is unusually good, although it was done by a German, as we are inclined to believe, owing to a few teutonisms which we noticed here and there in the text, and which probably have been overlooked by the learned editor. We believe it to be from the author's own pen, since it dates back as far as 1797. The work is one destined for the lay reader, but is written in a form sufficiently attractive to the thinking physician. It is divided into three parts, the first containing general considerations bearing on the subject, and based on comparative physiology, which are well worthy of the philosopher's attention. The second is devoted to a consideration of the causes which shorten life, and the third to the means which prolong it. The work is, of course, "behind the times," in some respects, but not so much so as to impair its worth. On the contrary, in this fact lies its peculiar interest. In reading it we involuntarily compare the ideas of an accomplished scholar of nearly a century ago with the knowledge of the present day, and the fact that some of the terms used are obsolete to day—such as "first matter" for protoplasm, etc.—make the book more quaint and attractive. After all, how small has been our progress in the science of life, since the days of Hufeland! Whoever reads the book will not regret the time given to its perusal, for the facts contained in it, although now well known, acquire a new interest from the way in which the author collates them and brings them to bear on his subject. D'A.

(I) EIGHTH ANNUAL REPORT RELATING TO THE REGISTRY AND RETURN OF BIRTHS, MARRIAGES, AND DEATHS IN MICHIGAN FOR THE YEAR 1874. By the Superintendent of Vital Statistics, under the general direction of the Secretary of State. Cloth; pages, 362.

(II) SEVENTH ANNUAL REPORT OF THE SECRETARY OF THE STATE BOARD OF HEALTH OF THE STATE OF MICHIGAN FOR THE FISCAL YEAR ENDING SEPTEMBER 30, 1879. Cloth; pages, 548. Lansing: W. S. George & Co., State Printers and Binders, 1880.

In the matter of informing its citizens of the best sanitary measures, Michigan surpasses any other State in the Union. This is in a large measure due to its very efficient State Board of Health and especially to the hard-working Secretary of this Board, who is also Superintendant of the Vital Statistics. Many of the instructions of the Michigan State Board of Health (as for instance the method of resuscitating the drowned) have been of practical value in preserving the lives not only of residents of the State, but of others in various parts of the world. We are proud of our State Board of Health and the volumes before us furnish farther evidence of the good work done. From the Report of the Vital Statistics we learn that in the year 1874, there were about 55,841 births, 20,090 deaths and 11,041 marriages. The causes of death have already been referred to in this journal. Phthisis heads the list, with pneumonia, typhoid fever, scarlet fever, old age, heart disease, dysentery, cholera infantum, inflammation of the brain, dropsy, and diphtheria following in the order given. It seems that pneumonia is most prevalent when the weather is cold and dry with sharp winds. February, March and April are its favorite months. Diphtheria did its greatest damage in that year in September; while dysentery and diarrhœa prevailed in August: scarlet fever in April and typhoid fever in October.

A MANUAL OF MEDICAL JURISPRUDENCE. By Alfred Swayne Taylor, M. D., F. R. S., Fellow of the Royal College of Physicians; Honorary Member of the Medico-Legal Society of New York, of the Société de Médicine Légale, of Paris, and of the Medical Society of Sweden; late Lecturer on Medical Jurisprudence and Chemistry in Grey's Hospital. Eighth American from the tenth London edition, containing the author's latest notes made expressly for this edition. Edited with additional notes and references by John J. Reese, M. D., Professor of Medical Jurisprudence and Toxicology in the University of Pennsylvania; Fellow of the College of Physicians of Philadelphia, etc. Half Russia; pages, 933. Philadelphia: H. C. Lea's Son & Co., 1880. For Sale by John Moore, Ann Arbor.

Taylor's Manual of Jurisprudence was first published in 1844. Since that time it has gone through ten editions in England, and has reached its eighth in this country. The preparation of the notes for the last American edition was the last work done by the distinguished author, whose death is now mourned by the professions of both law and medicine. This last edition has been thoroughly revised and brought up to the times. The American editor has enlarged occasionally upon subjects of special interest to the profession in this country. Selections have also been made from the author's larger work on "The Principles and Practice of Medical Jurisprudence." The notes of the former American authors, Dr. Hartshorne and Judge Penrose, have also been retained. Every medical man should be acquainted with this subject and the text before us is the best one as well as the most widely known yet presented to the profession.

HOW A PERSON THREATENED OR AFFLICTED WITH BRIGHT'S DISEASE OUGHT TO LIVE. By Joseph F. Edwards, M. D. Cloth; pages, 87; price, 75 cents. Philadelphia: Presley Blakiston, 1880. For sale by John Moore, Ann Arbor.

We wish that we could fully indorse this little book; for a good popular work on this subject is certainly needed. But the monograph before us is wanting in many respects. In the first place a work written for the general reader should not contain so many errors as this does. These errors would be detected by members of the profession, and consequently could not do any great harm. We wonder where and when the author studied physiology! He informs us on page 33 that "as the particles of our body die and decay, some of them assume the form of carbon, and as such are carried in the blood to the lungs where they meet and unite with the oxygen to form carbonic acid, in which shape they are carried out of the body in expiration." Upon reading this we thought surely the author does not mean to teach that carbon as such is carried in the blood from all the tissues to the lungs before it combines with oxygen. But on page 70 we find the former statement repeated in the following words: "Many of these particles are carried into the lungs in the shape of carbon; you also receive into your lungs a certain amount of oxygen in the air which you breathe; now, carbon has a great affinity or liking for oxygen, so when these two substances *are brought into contact in the lungs they rush together and unite*," etc. (Italics, ours). On page 51 we find that the author had his hands contaminated "by the strong pungent odor of *urea*." We did not know that urea had so disagreeable an odor. On page 38, *et. seq.*, the old and exploded doctrine that muscular exertion greatly increases the excretion of nitrogen by the kidney is taught. These are some samples of the physiology of the author. But there are sins of omission as great as those of commission. We expected a line of diet for the man with kidney disease, while the information on this subject is very meager and unsatisfactory. The strictures upon the abuse of alcohol and tobacco are good, and we wish that all persons addicted to either of these poisons could read and appreciate the statements made.

A MANUAL OF MINOR SURGERY AND BANDAGING. By Christopher Heath, F. R. C. S., Surgeon to University College Hospital and Holme Professor of Clinical Surgery in University College, London; Honorary Fellow of King's College. Sixth edition, revised and enlarged, with one hundred and fifteen illustrations. Philadelphia: Lindsay & Blakiston, 1880.

This excellent little work seems to be a literal reprint from the English edition, since it gives many points of English law, which might as well have been omitted, as being of no use to the American surgeon. The work was written especially for the guidance of the English hospital "house surgeon," and it would be difficult to find anything more clear, practical, and concise than the advice given relative to the house surgeon's duties and privileges, and his relations with the other officers, or, in fact, anything treated of in the book. A great deal of this, so far as it concerns general ethics, will be very useful to the young house surgeon of our country. A characteristic general feature of the work is the absence of those *dicta ex cathedra* which often puzzle the reader in other works. Whenever the distinguished author makes a statement, he gives the "why and wherefore." The medicinal treatment, so far as it is touched upon, is not as harsh as we often find in English works, but approaches more to the American; indeed, the author seems to appreciate American surgery, for he frequently quotes Howard, Gross, Hamilton, and others. The internal arrangement of some of the separate chapters seems to be a little confused, but each chapter in itself contains all that could be expected in a work of this nature. Simplicity of appliances is strongly prominent, and much increases the value of the book. This is especially noticeable in the chapters on splints and splint-bandages. In the latter the author lucidly describes a variety of stiff bandages for fractures, etc., which may be made on the shortest notice by the surgeon himself, of a variety of materials. Our country surgeons will appreciate this. The work also contains a good chapter on the treatment after excision of joints—such as falls to the house surgeon's share, and in case-taking. Appended is a collection of forty-seven standard formulæ selected from those used in the English hospitals. The work is fully up to the times. D'A.

TRANSACTIONS OF THE MEDICAL ASSOCIATION OF THE STATE OF MISSOURI AT ITS TWENTY-THIRD ANNUAL SESSION HELD AT CARTHAGE, MISSOURI, MAY 1880. From the Secretary, A. J. Steele, M. D.

This report, like those of most other medical societies, both state and national, contains some good matter mixed up with more rubbish. The retiring President's address is a rambling article, touching upon many and varied points; but we are happy to say that we found one good thought in it. This is the cry against the excess of specialism which is somewhat the fashion at the present. In one part of his address the worthy President so tells his story that a good lady is in labor *thirty* years, when another doctor is called (two having been with her from the first) and discovers that the alarm is false and that the lady has never been pregnant. *Thirty* years is a long while for a woman to be in labor and then to be told that she has raised a false alarm is too bad. Dr. Maughs congratulates the association in his closing remarks upon having secured a competent stenographer. Indeed it would have been too bad to have lost any part of the President's address!

Dr. Engleman read a valuable paper upon "uterine manipulations," pointing out the serious results that are liable to follow the simplest operations upon the female sexual organs. Dr. Todd gave some interesting facts concerning the dry treatment of otorrhœa which he recommends. An interesting and valuable note on the treatment of a deformity of the wrist-joint is made by Dr. Steele. The report is well gotten up and shows that the secretary has done his work with care and taste.

A TEXT-BOOK OF THE PHYSIOLOGICAL CHEMISTRY OF THE ANIMAL BODY INCLUDING AN ACCOUNT OF THE CHEMICAL CHANGES OCCURRING IN DISEASE. By Arthur Gamgee, M. D., F. R. S., Professor in the Victoria University, Manchester; Blackenbury Professor of Physiology in Owens College. Volume I; cloth; pages, 487; price, $4.50. London: Macmillan & Co., 1880.

In this work the author considers the subject of physiological chemistry from the stand point of the biologist and physician rather than from that of the chemist. But in doing this care has been taken that no chemical fact and even no chemical speculation should be omitted which appeared likely to throw light upon a biological question. The greater part of this volume is devoted to the chemistry of the blood in health and disease. This volume forms a complete and independent work by itself, but it will be followed within twelve months by a second volume in which the chemistry of the chief animal functions will be treated of. The work is an eminently practical one and will be of great value to the scientific physician. In regard to the effects of muscular exertion upon the excretion of nitrogen, the author concludes that the excretion of nitrogen is slightly increased by muscular exertion, but that the increase is unimportant and not by any means sufficient to sustain the old theory that muscular exertion is dependent upon the oxidation of muscular tissue. Comparing this work with the texts of Gorup-Besanez and Hoppe-Seyler, we find that Dr. Gamgee's work is the most practical, but it lacks the bright philosophical spirit as well as the broadness of the German authors—especially of that most accomplished master of the science, Gorup-Besanez.

A PRACTICAL TREATISE ON THE DISEASES OF WOMEN. By T. Gaillard Thomas, M. D., Professor of Diseases of Women in the College of Physicians and Surgeons, New York; President of the American Gynæcological Society for 1879; Vice-President of the New York Academy of Medicine, etc. Fifth edition, enlarged and thoroughly revised, containing two hundred and sixty-three wood cuts. Pages, 809; half Russia, $6.50. Henry C. Lea's Son & Co., 1880. For sale by John Moore, Ann Arbor.

This book was first issued in 1868, since which time it has passed through four American editions and has been translated into German, French, Italian and Spanish. These are evidences sufficient of the high merit of the work. The last two years have been spent by the author in preparing this edition, and much new matter has been introduced. All who have attended Dr. Thomas' clinics know that he is a thorough teacher and the various subjects presented in the text are given with the clearness and vivacity characteristic of the author.

SCRIBNER'S for January. Scribner & Co., New York.

The January number of Scribner's will contain an account of the aims and methods of the new Horological and Thermometrical Bureau recently established by the Winchester Observatory of Yale College, from careful personal inspection on the spot. This is the first bureau of the kind established in this country, and cannot fail to raise the standard of excellence in both clocks, watches, and thermometers. The curious machinery used to correct watches to the tenth of a second, together with some singular facts in the behavior and habits of thermometers, make the article of more than usual interest. The same number also contains some account of Mr. John La Farge's and Mr. Louis C. Tiffany's recent work in stained glass.

MEDICAL HERESIES, HISTORICALLY CONSIDERED. A SERIES OF CRITICAL ESSAYS ON THE ORIGIN AND EVOLUTION OF SECTARIAN MEDICINE, EMBRACING A SPECIAL SKETCH AND REVIEW OF HOMŒOPATHY PAST AND PRESENT. By G. C. Smythe, A. M., M. D., Professor of the Practice of Medicine, Central College of Physicians and Surgeons, Indianapolis; Member of American Medical Association, etc. Cloth; pages, 228; price, $1.25. Philadelphia: Presley Blakiston, 1880. For sale by John Moore, Ann Arbor.

This is quite a valuable and entertaining work. The historical sketch of the various schools of medicine is well written. We have long wished for some condensed historical essay upon this subject, and this little volume supplies our want. The names of such heroes as Servetus should be rescued from the obscurity in which ecclesiastical history has endeavored to cast them. We hope that some of our American medical schools will establish a course of lectures upon the history of medicine.

The part of the work devoted to the discussion of homœopathy is written in an admirable manner. The system is shown in its true light. What homœopathy is, is illustrated by quotations from homœopathic authors. How dishonest many homœopaths are, is illustrated by giving samples of their prescriptions, and by showing how they misrepresent by their statistics. For some years the homœopaths have had charge of a public hospital on Ward's Island. The officers would send out the convalescent patients and have them visit the commissioner's office and get new permits. In this way the same patient is counted many times, and the percentage of death in the annual report is low. Men in charge of a public hospital and acting so dishonestly should be punished in some way. A few years in the State penitentiary would not be too severe.

Dr. Smythe has done a good thing for rational medicine as well as for common honesty and decency in this little volume, which we hope will be extensively read.

SAINT NICHOLAS for January. Charles Scribner & Co., New York.

"Bright-eyes," the young Ponca Indian maiden whose sketch of Indian life appears in the January Saint Nicholas, writes as follows to the editor of that magazine:

"It seems so hard to make white people believe that we Indians are human beings of like passions and affections with themselves; that it is as hard for us to be good as it is for them—harder, for we are ignorant—and we feel as badly when we fail as they do. That is the reason I have written my story as I have. * * It would be so much better for my people if the white people had a more thorough knowledge of them, because we have felt deeply the results of their ignorance of us."

THE

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ORIGINAL ARTICLES.

TUBERCULAR LARYNGITIS OR LARYNGEAL PHTHISIS.*

BY C. J. LUNDY, M. D., DETROIT, MICHIGAN,
Professor of Diseases of the Eye, Ear and Throat, in the Michigan College of Medicine.

MR. PRESIDENT AND GENTLEMEN: In this short paper it is neither my desire nor my intention to discuss the subject of tuberculosis in general, and I shall confine my remarks to the manifestation of tubercular disease of the larynx. Tubercular laryngitis, which usually runs a chronic course, is characterized by certain intra-laryngeal lesions, the study and observation of which have been made possible by means of the laryngoscope. The pathological changes which are usually observed in such cases are, more or less swelling, œdema and infiltration of the mucous membrane and submucous tissue, and ulceration and destruction of the soft parts, followed in some instances even by necrosis and destruction of the cartilages themselves. To designate this affection, various phrases have been employed, such as tubercular laryngitis, laryngeal phthisis, throat consumption, etc., etc. To the first of these (tubercular laryngitis) objections were formerly raised by those who denied the presence of tubercle in the larynx during the course of this disease; but in the present light of pathology no such objection can be considered valid.

The disease rarely or never occurs in persons who are not the victims of phthisis pulmonalis; although the presence of the pulmonary affection may not always be manifest, even on the most careful examination. The termination of tubercular laryngitis is nearly or quite always fatal, although its arrest, and even its cure, has been claimed by several laryngeal surgeons of prominence.

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*A paper read before the Ann Arbor Medical and Surgical Society, January 19, 1881.

Regarding the pathology of this disease, much diversity of opinion exists, especially concerning the role which is played by tubercle. Many writers have denied its presence; others admit its presence in exceptional cases; while the majority of careful observers maintain the presence of tubercle in most instances. Heinze, Virchow and Mackenzie have thrown such light upon this subject of late, that we can no longer doubt the presence of tubercle in the laryngeal mucous and submucous tissue, or deny its importance from a pathological stand-point. In examining, postmortem, four hundred and seventy-five cases of tubercular laryngitis, at the Pathological Institute in Leipzig, Heinze found tubercle in ninety-four per cent. of them. His observations not only show that tubercle is present in a majority of cases, but also that it is an important factor in causing ulceration and destruction of tissue.

Although tuberculosis of the larynx is proven to exist more frequently than was formerly admitted, and although its presence leads to destructive changes within the larynx, yet it is an undoubted fact that similar changes may occur in the larynges of phthisical subjects independently of tubercular deposit. Notwithstanding the fact that Heinze found tubercle in nearly all cases examined postmortem, it is conceded that in many instances tubercle does not exist *ab initio*. When tuberculosis of the larynx occurs, tubercle is usually found in the mucous and submucous connective tissue; and it is observed more frequently at certain points than at others. Heinze found tubercle most frequently in the ventricular bands, in the ary-epiglottic folds and over the arytenoids in the order in which these are named.

The occurrence of tubercle causes inflammation of the surrounding tissue, with serous exudation and escape of wandering cells. The latter, according to Mackenzie, may be observed both as general infiltration and as more or less circumscribed collections. As a natural sequence, the nutrition of the parts is more or less disturbed, and degenerative changes follow. The formation of ulcers may be said to determine the second stage of tubercular laryngitis. In many cases these ulcers are first observed in and around the follicular structures of the larynx. Though small in extent, they are occasionally quite deep, and as the destructive process continues, they become larger and larger, and several of them may unite to form one extensive ulcer. The ulcerative process extends deeper and deeper, and involves not only the mucous membrane and submucous connective tissue, but also the glands and muscles, and even the cartilages.

Heinze found ulceration most frequently on the vocal cords. Ulceration of the vocal cords was present in eighty-one per cent. of Heinze's cases; ulceration of the epiglottis in fifty-three per cent., and ulceration of the arytenoid cartilages in 46.9 per cent. In six cases which have come under my own observation during the past year, ulceration of the vocal cords was observed in four cases. In one case, that of Mrs. S., age thirty, who recently died of pulmonary phthisis at the Michigan College Hospital, ulceration was confined to the vocal cords alone. Ulceration of the epiglottis was observed in four cases; ulceration of the arytenoids and ary-epiglottic folds, in three cases; ulceration of the inter-arytenoid folds, in three cases; ulceration of the ventricular bands, in two cases, and in one case there was no ulceration.

In five hundred cases of laryngeal phthisis, tabulated by Morel Mackenzie, ulceration occurred as follows:

On the vocal cords in one hundred and fifty-seven cases,
On the epiglottis in one hundred and eleven cases,
On the ventricular bands in ninety-seven cases,
On the inter-arytenoid fold in ninety-two cases,
On the ary-epiglottic folds in fifty-two cases.

Following ulceration of the soft parts, we occasionally find perichondritis, chondritis, and even necrosis and destruction of the cartilages. In one hundred cases examined, postmortem, by Mackenzie, there were eleven cases of perichondritis with thickening of the perichondrium, fifteen cases of necrosis of the cartilages and separation of the perichondrium by pus, and in seventy-five cases there was ossification of the cartilages.

Œdema is present to a greater or lesser degree in nearly all cases of laryngeal phthisis. I have seen but one case in which it was entirely absent after ulceration had existed for any length of time. Mackenzie found œdema present seventy-one times in one hundred cases examined postmortem. The œdema is occasionally very great, and the calibre of the larynx is much diminished in consequence, and in rare instances the patient is in danger of death from asphyxia. In one case which came under my observation, that of James R., age thirty, hotel clerk, the œdema was so marked that intense distress was caused on the slightest exertion, and scarification and other measures were resorted to in order to relieve the distress and remove the immediate danger. In this and in two other cases the œdema of the epiglottis was so great that deglutition was attended with difficulty and distress, and a fatal termination was hastened in consequence. In each of these cases the valvular function of the epiglottis was destroyed, and in the act of deglutition particles of food would drop into the glottis and cause distressing fits of coughing with more or less laryngeal spasm. In one case, that of Charles M., age thirty-five, blacksmith, who had pulmonary phthisis of three years standing, with symptoms of laryngeal phthisis for a few months, the act of deglutition was attended with such difficulty, that both the patient and his friends supposed there was some obstruction in the œsophagus. Indeed, it was to determine the nature of this obstruction that I was requested to examine the patient. Laryngoscopic examination revealed an epiglottis so swollen and œdematous that it offered a real obstruction to nourishing the patient per orem, in consequence of which his lease of life was much shortened.

By many writers it has been stated that the laryngeal ulceration occurs only on the same side as that of the pulmonary disease, and that it indicates that cavities have formed in the lung. According to my observation these views are not tenable. In one patient William B., age twenty-seven, upholsterer, who came under my care some months ago, laryngeal trouble made its appearance before any physical signs of pulmonary disease were manifest. Even while the pulmonary disease was confined to a small portion of one lung, and long before any breaking down of lung tissue occurred, the larynx was extensively ulcerated and quite swollen and œdematous. Neither was the right side of the larynx more extensively involved than the left, although careful examination could detect no physical signs of disease in the left lung at that date.

So far as my observation goes, the side of the larynx involved bears no very constant relation to the lung involved; and although cavities in the lung are often present when laryngeal phthisis occurs, yet they are by no means of constant occurrence.

The causes of tubercular laryngitis are predisposing and exciting. Among the predisposing causes, sex and age may be mentioned. Of the cases which have come under my observation, I have notes of only thirteen, of which eight were males and five were females. This number is entirely too small upon which to base any calculations, and I am obliged to refer again to the valuable statistics of Mackenzie. This author found, in a total of five hundred cases, that three hundred and sixty-five were males and one hundred and thirty-five were females—or about 2.7 males to one female. This corresponds pretty closely to the experience of others as regards the relative frequency of the disease in the two sexes. It also corresponds very closely with the observations made by Professor Austin Flint, on the relative frequency of pulmonary phthisis in the male and female. Of four hundred and forty-eight patients examined by Dr. Flint in private practice, three hundred and twenty-one were males and one hundred and twenty-seven were females—or a trifle more than 2.5 males to one female.

Age is another predisposing cause of tubercular laryngitis. The vast majority of cases occur between the ages of twenty and forty years. Of three hundred and seventy-six cases examined in the Pathological Institute in Leipzig, two hundred and forty-two were between twenty-one and forty years of age. Of the five hundred patients examined by Mackenzie, three hundred and fifty-six were between the ages of twenty and forty. In the cases which have come under my observation, all the patients were over twenty years, and all, save one, were under thirty-seven years of age. One patient was over forty. It will also be noticed that the period of life during which most cases of laryngeal phthisis occur, corresponds pretty closely with that in which pulmonary phthisis most frequently manifests itself. For example, Heinze observed that in one thousand two hundred cases of pulmonary phthisis, the disease occurred in seven hundred and nine patients over twenty-one and under forty years. Of five hundred and eighty-three cases noted by Professor Flint, four hundred and thirty-nine patients were between the ages of twenty and forty.

Mackenzie thinks that "a weakness of the larynx" may predispose to the disease, but it is not probable that other affections of the larynx exert any very marked influence as predisposing causes. Although laryngeal catarrh is quite prevalent in this climate, yet I do not think the number of cases of tubercular laryngitis is relatively large. According to MacKenzie tubercular laryngitis occurs once in every three cases of pulmonary phthisis. Heinze places the proportion at thirty cases of tubercular laryngitis to one hundred cases of phthisis pulmonalis.

The exciting causes are identical with the causes of tuberculosis of other organs, and it is not necessary to discuss them here. The occurrence of primary tuberculosis of the larynx is still a mooted question. The affirmative is maintained by several pathologists of eminence, while the negative side of the question is upheld by men of equal authority.

Why some organs are frequently the seat of secondary tuberculosis, while others escape, is a question which cannot be satisfactorily answered.

The diagnosis—and especially the early diagnosis—of laryngeal phthisis, is, for obvious reasons, a matter of great importance. The diagnosis of this affection has been made comparatively easy by means of the laryngoscope. While certain signs and symptoms may point to the presence of tubercular laryngitis, it should be borne in mind, that only by aid of the laryngoscope can a positive diagnosis be made. The laryngoscopic appearances are often the first to arouse a suspicion of tuberculosis, and in some instances the disease can be diagnosed before the physical signs of any pulmonary affection can be detected. In two cases which came under my care, pulmonary disease was not even suspected by the family physicians, although the laryngeal disease was far advanced. In both these instances the patients had been led to entertain hopes of a speedy recovery—hopes which, I regret to say, were never realized. One of these patients had been examined, and accepted for life insurance, at a time when, I am confident, laryngoscopic examination would have revealed the presence of tubercular laryngitis. In two other cases which came under my observation, no opinion had been given by the medical attendants, as to the existence of any tubercular disease. In both instances unmistakable signs of pulmonary disease were manifest, and in one case the lung was, in all probability, involved long before the disease invaded the larynx. I was recently consulted by still another patient who had been assured that no pulmonary disease existed, and in whose larynx evidence of tuberculosis was quite marked. There was dullness over a small area at the apex of the right lung.

Of the laryngoscopic appearances which present themselves in the course of tubercular laryngitis, it will be necessary to say a few words, for these appearances furnish the only reliable evidence of the disease. Paleness and anæmia of the mucous membrane are among the first signs of laryngeal phthisis. The anæmia is of a peculiar character, and while many enlarged capillaries may be seen coursing over the surface, yet the mucous membrane presents a pale, muddy appearance. The anæmia is often more marked than the general pallor of the patient would lead us to expect, and it may be present while no signs of general anæmia exist—even while the patient is quite ruddy. While this pale, dull, opaque appearance of the laryngeal mucous membrane is pretty general, we frequently see patches of a rosy hue, and such patches may be much congested and quite red. However, it must be admitted that there is nothing about such appearances which can be considered pathognomic, when taken by themselves, or when disconnected from other signs and symptoms. After tubercular infiltration has taken place, or after inflammation of the follicular structure has begun, swelling and thickening of some portion of the mucous membrane and submucous tissue may be observed. The swelling may be circumscribed or it may be pretty general, but in the earlier stages it is usually circumscribed. In the final stage of the disease, the swelling, infiltration and œdema become more marked, and also more general, and then we see nearly all the soft parts swollen to a considerable degree. Indeed, I have seen some cases in which the swelling and œdema were so great that nearly all the land marks, so to speak, were obliterated, and one not accustomed to seeing this condition would not be likely to recognize the larynx at all. However, great swelling and œdema are apt to show themselves only after the perichondrium and cartilages have become involved in the process of destruction. The arytenoids often present a pyriform appearance which is quite characteristic; and the swelling may be so great as to interfere with the action of the arytenoids and vocal cords and thus cause aphonia.

It is claimed by many surgeons that tubercular elevations may be seen upon the laryngeal mucous membrane; but others deny that such elevations are tubercular, or maintain that they cannot be diagnosed as tubercle. I have seen such elevations, but supposed they were enlarged follicles which they probably were.

Ulceration and destruction of the soft parts are among the most characteristic appearances to be seen in tubercular laryngitis. At first, the ulcers are small and multiple, but later several of them may unite to form more extensive ones. The ulceration which occurs in this disease should not be confounded with follicular ulceration which sometimes occurs in the course of laryngeal catarrh. This error is liable to be made only in the early part of the ulcerative stage of tubercular laryngitis. The ulcers in laryngeal phthisis may be circular or nearly so, and often have irregular or dentated edges. They are usually covered with muco-purulent or purulent matter which is occasionally mixed with blood. Beneath the filmy covering of the ulcer, and often protruding through it, fleshy granulations or vegetations may be observed.

The subjective symptoms vary in the different stages of the disease, but it is only after ulceration begins that they attract much attention. Cough is present quite early, but later it becomes very annoying.

After ulceration occurs, deglutition is apt to be more or less painful. When great swelling or œdema of the epiglottis takes place, violent fits of coughing with some laryngeal spasm occur as the result of food falling into the glottis. If swelling of the soft parts is very marked, as it is apt to be in the last stage, there will be obstructed respiration and sometimes dyspnœa.

The objective symptoms, like the subjective, vary as the case progresses. The voice is hoarse at first, but aphonia usually occurs later. The expectoration is mainly mucus at first, but later it becomes muco-purulent, and is oftened streaked with blood.

To these may be superadded all the symptoms of pulmonary phthisis, such as emaciation, loss of weight, elevation of temperature, hectic, night-sweats, etc., etc.

The differential diagnosis of tubercular laryngitis does not often present serious difficulty, but in some instances it is liable to be confounded with laryngeal syphilis. The laryngoscopic appearances of the two diseases present several points of difference, which should enable us to distinguish the one from the other; and at the expense of some repetition, I shall name a few of these.

The following tabulated statement, in brief, shows upon the one hand some of the laryngoscopic appearances of laryngeal phthisis; and upon the other, some differential points in laryngeal syphilis:

TUBERCULAR LARYNGITIS.	LARYNGEAL SYPHILIS.
Mucous membrane pale, or congestion circumscribed.	Mucous membrane, usually congested and rosy or dusky red.
Ulcers, small and multiple.	Ulcers, large and single, or few in number.
Ulceration does not usually occur soon after invasion.	Ulceration occurs sooner after first symptoms.
Ulcers, surrounded by pale, muddy looking tissue.	Ulcers, surrounded by a red inflamed margin.
Ulcers, usually covered with pus or muco-pus.	Ulcers have little secretion.
No attempt at repair.	Cicatrization often takes place, and can be seen by laryngoscope.
Swelling, usually great and diffuse in late stages.	Swelling, not apt to be so great or so diffuse.
Characteristic pyriform appearances of arytenoids in many cases.	Nothing characteristic.
Disease, progressive.	Disease is apt to be chronic with history of relapses.
OTHER DISTINGUISHING SIGNS AND SYMPTOMS.	
Signs of tubercular disease.	History of syphilitic infection.
Nearly always associated with pulmonary phthisis.	Other symptoms of syphilis nearly always present.
Harrasing cough in most cases.	Cough not so troublesome.
Expectoration, usually profuse.	Expectoration scanty.
Aphonia, in late stages.	Aphonia, not so frequent.
Pain, a more prominent symptom.	Pain, not so prominent.
Disease, usually resists treatment.	Disease, usually yields to treatment.

From what has already been stated, it will be inferred that the prognosis cannot be favorable. I regret to state that, so far as my observation goes there is little prospect of permanent recovery. It is true, that many of the cases which came under my observation were referred to me for examination and advice, at a time when a cure was out of the question.

Drs. Bosworth and Beverly Robinson, of New York, as well as others, have succeeded in curing quite a number of cases. However, many surgeons still doubt that a cure can be effected in tubercular laryngitis. Some, even, are inclined to believe that the cases of reported recovery were not tubercular laryngitis, but were cases of laryngeal catarrh with follicular ulceration or erosion of the mucous membrane. Mackenzie says that the "prognosis is always extremely unfavorable," and that "it is not certain that any cases recover." However, the distressing symptoms can often be mitigated, and temporary improvement can be brought about in many cases, just as we see temporary improvement in some cases of pulmonary phthisis.

The duration of the disease may vary from a few months to two or three years or even longer. The great majority of cases terminate fatally before the end of the second year.

The treatment of laryngeal phthisis should be constitutional, general and local. Although the prospects are not favorable for a brilliant cure in these cases, yet the patient should receive all the comfort and relief which our art can afford him, and everything possible should be done to soothe his miserable existence. The treatment may be so directed that it will not only relieve the patient's distress, but also retard the progress of the disease, check it for a time, or even cure it as some surgeons have claimed.

The constitutional treatment should consist in supporting the powers of the patient, in the prevention of wasting and emaciation, and in placing him in the most favorable hygienic surroundings—in a word, the constitutional treatment should not differ essentially from that which should be pursued in the management of phthisis pulmonalis. It must be borne in mind, however, that in many instances, an obstacle arises in regard to nourishing the patient which is not met with when the disease is confined to the lung. This consists in the difficulty and distress which many of these unfortunates experience in the act of deglutition. If solid food is taken, particles of it may fall into the larynx and cause distressing cough etc.; and the ingestion of liquids often produces even greater distress.

To obviate this annoyance, soft solids, or thick liquids should be given, as far as is practicable and as far as is consistent with the proper nutrition of the patient. It should also be remembered, that aside from the occurrences just referred to, deglutition is more or less painful, in most cases, after ulceration has begun. Indeed, patients will often endure the pangs of hunger, rather than suffer the pain caused by acts of deglutition. Therefore, it is often necessary to resort to other means of nourishing the patient, than the introduction of food *per vias naturales*. However, it is entirely beyond the scope of this paper to enter into any discussion of the various methods which may be resorted to in nourishing such patients, and I shall content myself with barely referring to its importance.

As is well known, cough is often a troublesome symptom, even in phthisis pulmonalis; but in most cases of advanced laryngeal phthisis it becomes truly harassing, and the patient is worn out and exhausted from the constant hacking. Local treatment will not always be sufficient to control this cough, and consequently it will sometimes be necessary to resort to some general or systemic treatment. For this purpose remedies may be administered per orem, per rectum or hypodermically. Patients, who spend sleepless nights on account of the annoying cough, will often entreat the medical attendant to give them something to control it, and to refuse their request, on the ground that remedies so administered cannot cure the disease, is not only inhumane, but positively cruel. Remedies employed to relieve troublesome cough may be administered as the medical attendant prefers, and they should consist of such agents as will meet the indications without producing much disturbance of digestion, etc.

Chloranodyne is a useful combination in such cases; and if the physician is willing to transgress the "code," by using a proprietary medicine, he will find "chlorodyne" a very valuable remedy.

The local treatment of tubercular laryngitis is a matter of much importance, and it is unfortunate that it cannot always be faithfully and systematically carried out. The local applications may be employed either with a view to checking or curing the disease, or to controlling the cough, or for both these purposes. Such applications may consist of liquids applied with the laryngeal brush, of sprays used with an atomizer, of powders used with an insufflator or of medicated steam from an inhaler. Each of these modes of intra-laryngeal medication has its advocates; and while all possess merits, sometimes one and sometimes another will be found most useful. However, the stage which the disease has reached and the conditions which present themselves will frequently have much to do in determining the remedy which should be employed, and the mode of its application. Before making applications, whether liquid or powder, spray or steam, it is advisable to remove, if possible, the secretion from the parts, in order that the remedy may come in contact with the diseased surface. Especially, is this necessary if ulceration exist.

As topical applications, solutions of nitrate of silver, iodine, carbolic acid, the various preparations of zinc, preparations of iron, of alum, etc., have been employed with more or less benefit. Powders of various kinds may be used by means of the insufflator, especially after ulceration has begun. Iodoform, iodoform with tannin, or iodoform and morphia have been much employed. I have had more satisfactory results from iodoform, either alone or in combination, than from any other agent. Nitrate of silver rubbed up with acacia and morphia may be applied in this manner. Morphia is an excellent remedy for controlling cough. The troublesome cough may be allayed for hours by its local application. It is also a valuable remedy in releiving dysphagia, which is often an obstacle to nourishing the patient. From one-twelfth to one-eighth of a grain or more may be mixed with some bland and soluble powder, such as starch or acacia, and this may be blown over the ulcerated surface. Conium, cannabis Indica and other anodynes may be employed to meet the same indications. Steam impregnated with compound tincture of benzoin often proves soothing to the irritated larynx.

When great œdema exists scarification of the mucous membrane, by a suitably constructed knife, will sometimes be of temporary benefit, and may relieve distressing dyspnœa.

Tracheotomy has been warmly advocated by a few surgeons, and doubtless it is a warrantable procedure, under certain circumstances. Notwithstanding, that Mackenzie and others have raised the objection, that tracheotomy, at best, can but prolong a miserable existence, yet it may be very desirable to prolong that existence, even though it is miserable, and even though the means employed are heroic.

DIAGNOSIS OF STONE IN THE BLADDER.

BY W. H. SMITH, M. D., PH. D., SAINT CLAIR, MICHIGAN.

In examining a person complaining of urinary difficulties various morbid phenomena are to be considered. Thus if the patient be a man advanced in years one may almost conclude without an examination that his troubles are due to an enlarged prostate. At least in the great majority of cases such would be the fact. It is true that a suspicion of calculus behind the hypertrophied gland should always be entertained, inasmuch as that affection furnishes excellent conditions for the formation of a stone; and it is also a well known fact that the presence of a calculus will cause more or less cystitis. But in looking for stone there are certain symptoms associated with it, not probably all present in any one case, from which the surgeon or physician may infer the existence of the abnormal product. These symptoms and their significance are in brief as follows:

(1) *Frequency of Micturition.*—This will be increased in various affections as diabetes, albuminuria and nervous diseases when the quantity of urine voided is excessive. If the increased frequency be not due to such causes, it points to lesions of the urinary tract. The increase due to cystitis is tolerably uniform and constant both by night and day, but slightly worse in the latter, that resulting from prostatic disease is more troublesome at night when the patient is warm in bed, and that due to stone is aggravated by day when the sufferer is moving about or jostled. For instance a patient whose micturition is rendered

much more frequent and painful by riding upon horseback or in a carriage, is probably troubled with stone.

(2) *Retention of Urine.*—In children retention is usually a consequence of stone. It may, however, be due to tumor of the bladder, mechanical obstruction in the urethra, a contracted meatus, or tight prepuce. In men it is often a result of stricture, spasm, prostatitis, and lacunar or other abscess.

(3) *Incontinence of Urine.*—This is generally a symptom of retention, the overflow being simply the result of distention. At times paralysis of the bladder exists, but more frequently it is caused by the third lobe of an enlarged prostate projecting into the viscus. In some cases diurnal and nocturnal incontinence result from the impaction of a calculus in the deeper portion of the urethra. In children the irritation of worms is a common cause of incontinence, and in boys it is an occasional consequence of the reflex irritation set up from the proper escape of the urine being prevented by a congenitally contracted meatus.

(4) *Character of the Stream.*—An intermittent stream usually indicates stone as does also the sudden cessation of the flow of urine. The explanation is that the calculus falls into the urethral opening and shuts off the stream. A narrow or spiral stream is usually occasioned by stricture and one that drops off suddenly at the end of the penis is as a rule the result of prostatic disease.

(5) *Pain.*—If this be much worse before urination it is probably owing to inflammation of the bladder and pain aggravated during micturition shows something wrong in the passage, but after omichesis it indicates that the viscus closes on something abnormal which may be either a stone or enlarged prostate. The pain due to a vesical calculus is often referred to the glans penis, and is present during and after micturition with a constant desire to pass water until fresh urine trickles down and separates the stone from the highly sensitive neck of the bladder. Pain low down in the abdomen usually points to prostatitis or chronic cystitis.

(6) *The Presence of Muco-pus.*—This may be due to irritation or inflammation in any part of the urinary tract. It is always present in catarrh of the bladder and usually renders cloudy the urine of patients suffering with vesical calculi.

(7) *Hæmaturia.*—In a majority of cases patients who pass blood from the bladder suffer from stone. However, the blood may come from the kidneys, ureters, bladder, prostate gland, urethra, uterus, or vagina, and may be occasioned by the use of certain drugs, gonorrhœa, rupture of the corpus spongiosum, prostatic congestion, cystitis, pyelitis, tumors cancerous or villous, mechanical injury to any part. and such diseases as purpura, scurvy, cholera, scarlatina, typhus and hæmorrhagic malarial fever, and the presence of the parasite *Bilharzia hæmatobia.*

The source of the blood in hæmaturia may often be surmised from phenomena connected with its escape. When it comes from the kidney it is usually passed without local symptoms or pain save in the lumbar region, and is intimately mingled with the water, giving to the urine a dark porter color. The only exception to this is that in some rare cases clots form in the infundibulum or upper part of the ureter and in their passage downward are attended with distressing pain. The whitish color of such clots and their cylindrical form when floated in water are characteristic. The color in itself would be absolutely diagnostic were it not for the fact that coagula resulting from vesical hæmorrhage are occasionally whitened owing to their being retained for some time in the urocystis. In hæmaturia of nephritic origin the blood is often associated with the presence of renal casts visible under the microscope. The detection of these or of the collection of the blood globules upon casts moulded into the shape of the renal tubes would render disease of the kidney unquestionable. Their absence, nevertheless, would not necessarily have any significance.

Urethral hæmorrhage can ordinarily be recognized by the history of the case, it being usually a result of gonorrhœa, syphilis, an injury, or stricture, or the blood may collect in and form casts of the *iter urinarium*, or by careful observation it may be detected as occurring independently of micturition. By one or the other of these means the source of the hæmorrhage is usually revealed.

In hæmaturia of vesical origin the urine generally has a florid tint. It thus differs in color from the brownish shade occasioned by renal hæmorrhage. In this case the blood passed is apt not to be equally diffused through the urine, but remains behind and escapes nearly or quite at the close of omichesis. Thus the water first passed is often comparatively clear, and the blood afterwards escapes in a relatively pure or coagulated condition. Pain over the bladder and obstruction to the flow of urine and a desire for frequent micturition are often of service in determining that the hæmorrhage is vesical.

Thus from the foregoing considerations the source of the hæmorrhage may be made probable and the existence of a calculus inferred, but after all the only sure test of the latter is the passage of the sound. The above symptoms are not necessarily all present in any given case, and even when they are their only value is in indicating to the surgeon the necessity of a farther and decisive mode of examination. No one can with certainty affirm the existence of a stone until he has heard it click against an instrument. The only exception to this is that, if, when a man is catheterized, the urine escapes with pain and violence through and alongside of the instrument, the presence of a calculus impacted in the deeper portion of the urethra is assured.

For the detection of calculi a steel sound is ordinarily employed. Sir Henry Thompson has proposed to improve upon this in certain cases by the use of the microphone. By connecting a steel sound with a telephone the click resulting from its striking a small stone will be rendered very apparent. An excellent instrument with which to search for vesical calculi is that suggested by Dr. Andrews, of Chicago, viz., a hollow steel sound like a catheter without eyelets, but with the prostatic curve over the upper end of which is slipped the extremity of a rubber tube. This tube should be about two feet long and connected at its free extremity with a stethoscopic ear-piece. With the aid of such an instrument fragments and stone so small as to escape notice by the ordinary method of investigation may be readily detected.

A CASE OF SUPPURATIVE ERYSIPELAS OF THE LEG: THE SUPPURATION EXTENDING IN THE CELLULAR TISSUE FROM THE HIP TO THE TOES.

BY W. T. DODGE, M. D., MARLETTE, MICHIGAN.

On November 19, 1880, I was called in consultation with Dr. Drummond, of this place, to see a patient with the following history:

Charles G., aged thirty-four, residence in Romeo, (married) carriage painter by occupation, and for several years has worked in the rubbing room of a paint shop. His health has not been good for the past year, being constantly troubled with a severe headache. On the 15th he rode from Romeo, a distance of forty miles, on horseback, and chaffed the inner side of the thigh very badly. The next day he had a high fever, and the thigh was inflamed. The family used an application of arnica leaves, and on the 17th, called in Dr. Drummond, who found the patient in high fever, tongue badly coated, dry and cracked, bowels constipated, and inner surface of thigh swollen and inflamed. He prescribed cinchonidia sulphate in three grain doses every three hours, and gave three compound cathartic pills. These moved the bowels the next day, but did not affect the temperature. On the 19th I saw the patient for the first time, and found his condition as detailed above. The bowels had been moving rather freely. Temperature, 104°; pulse, 120. The thigh was swollen very much, redness disappearing on pressure—great tenderness—diagnosed erysipelas, and prescribed:

℞. Cinchonidia sulph.......................... grains iij.
Quin. sulph.................................. grains ij.
M. S. One powder every hour, until six are taken.

Also placed him upon fifteen drops of tincture iron three times a day. On the 23d I saw the patient again. The skin had ulcerated in the meantime, and a large ulcerating surface was exposed to view, from which a very offensive discharge was flowing. Dr. Drummond had been using poultices of elm and charcoal, and washing the surface with carbolic acid. Judging that the patient's blood was deteriorated by long work in the paint-shop, I prescribed the following:

℞. Potass. iodide.......................... .... ʒ iij.
Syr. sarsap. co.................................. ℥ iv.

M. S. Teaspoonful every four hours, and continue the cinchonidia sulphate, grains iij, every three hours.

The further progress of the case I quote from my case-book: On November 24, the inflammation extended below the knee. Painted the whole surface with tincture iodine. November 26: Leg below the knee tensely swollen. Made numerous deep incisions and found some pus. November 28: Large amount of offensive pus has been flowing from every opening. The inflammation has passed in the cellular tissue up the inner surface of the thigh as far as Poupart's ligament, and down the back part of the thigh, under the knee and outer side of the leg, and over the dorsal surface of the foot to the toes. I made numerous free incisions along the whole limb, and injected a two per cent. solution of carbolic acid. November 29: Had troublesome oozing from the edges of one of the incisions in the thigh and used Monsell's solution freely. The general condition of the patient was very bad. The tongue badly coated, and no appetite. Temperature, 102°; pulse, 100. Suppuration extending very rapidly. Injected strong solution of carbolic acid. November 30: The general condition about the same. Suppuration still extending, and pus very offensive. Used an injection of nitrate of silver, two grains to one ounce of water. December 2: Leg has been washed thoroughly with two grain solution of nitrate of silver twice daily, and the suppuration is very much less and the pus less offensive. Ordered nitrate of silver injection continued. December 6: Yesterday a five grain injection of nitrate of silver was used, and now original ulcer in the thigh is filled with granulations. December 8: Discharge healthy in appearance. Granulation in all the incisions. Appetite ravenous. Discontinued cinchonidia sulphate, and prescribed:

℞. Tr. ferri. chlor.................................. ʒ ij.
Tr. cinch. co....................................... ℥ iv.
Aquæ. puræ...................................... ʒ ij.

M. S. Teaspoonful every four hours, alternated with the iodide of potassium mixture.

I also inserted a dozen grafts in the large ulcer on the thigh. December 15: Below the knee nearly all healed, except at the ankle, which looks inflamed. A large flap of skin on the thigh has not united. Grafts doing well. Used strong injection of nitrate of silver in ankle and tried strapping the thigh, thinking it would retain the flap in position. December 16: Edges of straps have caused some hæmorrhage, and was obliged to remove them. December 27: Ankle much inflamed, and a pocket of pus collected. Made free incision and injected a ten grain solution of sulphate of zinc. The flap at the thigh still indolent. Passed in gumelastic catheter and found skin loose for a long distance. Made incision at the end of the catheter and injected a ten grain solution zinci sulphatis. Ordered a weaker solution to be used every morning. January 6, 1881: Flap is partially united. Skin at ankle has united. Patient is unable to straighten the leg at the knee, and commenced passive movements with friction. Ordered them continued daily. January 15: The flap at the thigh is united firmly, and now the whole limb is sound, except a small granulating surface where the grafts were inserted. Patient is walking around with the aid of a crutch, and intends to return to Romeo on the 17th. He has been free from headache for a few weeks, and says he feels better than he has before for a year. I ordered the iodide of potassium mixture continued for a few weeks.

CASE OF STRANGULATED FEMORAL HERNIA.

BY KARL VON RUCK, M. D., S. B., NORWALK, OHIO.

My patient had suffered from a right femoral hernia since the last childbirth, about four years ago. Her hernia became irreducible early in the forenoon of December 11, 1879. Stercoraceous vomiting began about 2 o'clock in the afternoon. I saw her first at 10 o'clock P. M., the same day. Her symptoms appeared rather urgent, the vomiting of fecal matter became almost continuous. The tongue was dry and brown; pulse, 130, small, sharp, jerking; some tenderness in the sac, which was about the size of a hen's egg, and not resonant on percussion. Her expression was very anxious, and she complained much of pain in the tumor and colicky pain in abdomen. After a hypodermic injection of one-third grain of morphia, I placed her on a lounge, the foot of which I raised about three feet and applied taxis for nearly one hour without success. Her symptoms having become even more urgent I concluded to operate, but before sending for proper assistance I thought of making a last effort and proceeded by introducing two fingers into the vagina and making counter-pressure through the abdomen with the other hand, thus getting the gut between my fingers, while one of the attendants made steady pressure upon the tumor. I pressed the gut forward and downward into the pelvis, and after but a few moments of manipulation succeeded in completely reducing the hernia. Finding no mention made in my accessible medical literature of this mode of proceedure, I report this case, thinking it might prove useful when ordinary taxis has failed, and might save an operation in similar cases where there is danger from tearing the gut by the traction, on account of inflammatory softening or gangrene.

ATROPIA AS AN ANTIDOTE FOR MORPHIA.

BY D. A. JOY, M. D.,
Instructor in Chemistry in the University of Michigan.

A number of articles have lately appeared in various medical journals relating to the above subject, and I thought it might be of some interest to the readers of THE PHYSICIAN AND SURGEON, if I gave the history of a case which came under my care a short time ago. The patient was himself a physician, and had become exhausted and worn out by over zealous work in the prosecution of his profession. On the day previous to the taking of the morphine, he had had extracted an ulcerated tooth, but this seemed rather to aggravate than relieve the intolerable pain which he had in his jaw. It was to relieve this and to obtain some rest for his overtaxed system that he called in a physician, who administered half a grain of morphia and left a grain to be taken in case the first dose did not produce the desired effect. He took both doses, but could obtain no releif from his suffering. It was while in this condition, half crazed from the combined effect of the pain and the morphia, that in a spirit of desperation he went to his own bottle, and took the entire contents at a single dose. He thinks the bottle contained about six grains of morphia. It was not long after this that he sank into a profound sleep.

His family not knowing what he had done, were only too glad to see him in this condition, and it was not until about six hours afterwards, that some friends calling to see him, became alarmed at the extreme profoundness of his sleep and his very slow and stertorous breathing, but it was not until he had once or twice almost ceased breathing, or had what they called "sinking spells," that they concluded to send for a physician. Being near at hand I was called in with two other physicians and we were not long in coming to the conclusion that we had to deal with a case of morphine poisoning. I lost no time, but procured as quickly as possible a solution of atropia sulph. of the strength of one grain to the ounce of water. On returning I found that the other two physicians had been called away and on going in to see the patient I found him black in the face and not breathing a particle. I was afraid that I had arrived too late, but immediately resorted to artificial respiration, and soon had the satisfaction of seeing the blackness in the face fade away and give place to a ruddier hue. Leaving the task of keeping up artificial respiration to others, I injected hypodermically sixteen drops of the solution of Atropia. This dose was repeated twice at intervals of fifteen minutes and twice again at intervals of half an hour. He took in all therefore five doses; each containing the thirtieth of a grain of atropia, or in all one-sixth of a grain of the alkaloid.

The effect of the atropia was quite marked after the third dose. There was a flush of the face; an increase in the force and frequency of the heart beat, and a slight dilatation of the pupil, which had been reduced to about the size of a pin; there were also attempts at respiration and before the injection of the last dose it was not necessary to keep up artificial respiration. At first the respirations were only six to the minute, but they gradually increased to nine and before I left had reached eleven. This was about five hours after first seeing him. He did not regain consciousness until about noon of the next day, or about twenty-four hours after taking the morphine, and he remained for some time in a semi-delirious condition, which was probably due in part at least to the effects of atropia.

After witnessing the effects of atropia in the above case, I am convinced that there is a very marked antagonism between these two alkaloids and I should never neglect using them as antidotes for each other. Their antidotal action is, of course, entirely physiological, there being no chemical action between them, but is none the less efficacious on that account. If I had had a battery convenient I should have used it to keep up the respiration by applying one electrode over the pneumogastric in the neck and the other at the pit of the stomach. Whether this would have been of benefit or not I can not say, but it might have materially aided in stimulating the respiration.

EDITORIAL BRIEFS.

T. L. HOLLAND, M. D., graduate of the University of Michigan, class '80, died on the 16th of July last, at his home in LaGro, Indiana.

HOMŒOPATHY IN PENNSYLVANIA.—A few years ago, a pupil of mine entering a drug store, I told him to inform me of prescriptions handed in by *regular* "homœopaths," and a few days since he sent me the following:

℞.	Ergotine,	
	Ext. hellebori nig.,	
	Ferri sulph....................................	āā gr. xv.
	Al. sabinæ....................................	gt. xv.
M.	Ft. pill number fifteen.	

The above prescription was filled three times for the same man, twice as it stands above and once with the numbers changed from fifteen to *twenty-five.* The same friend has frequently sold to homœopaths, *half grain* podophyllin granules, and also in quantity, tincture aconite, tincture nux vomica, and tincture benzoin compound. He tells me they seldom write a prescription. G. G. G.

A STRIKING CONTRAST.—In the Quaker burial ground in West Chester, Pennsylvania, the average age of the persons buried there, including infants, is *fifty years*, while in the grounds of the colored population, the average age is but *twelve* years. In no portion of the country is the colored population better cared for by the whites than in West Chester.

CAUSES OF DEAFNESS.—Superintendent McIntyre reports the following as the causes of deafness of two hundred and fifty-four students now in the Michigan Asylum for the Deaf and Dumb at Flint:

Congenital	81
Cerebro-spinal meningitis and brain fever	83
Scarlet fever	10
Typhoid fever	14
Fever (not specified)	6
Measles	8
Whooping cough	3
Cold and inflammation	17
Dropsy (?)	3
Diphtheria	3
Spasms (?(	5
Scrofula	4
Mumps	3
Fall, hurt or blow	10
Teething	4
Sunstroke	1

The causes are those given by the person bringing the child to the institution, and consequently are most likely not free from error.

STATE INSTITUTE FOR THE DEAF AND DUMB, AT FLINT.—This institution now contains about two hundred and fifty pupils, who are arranged in eight grades. The instruction seems to be almost perfect; both the sign and oral methods being used. Unfortunately there is but one teacher giving instruction in the oral method; consequently, her work is very laborious and cannot extend to all the students. The trustees should urge the appointment of at least two assistants in this method. Some improvements in the buildings seem to us to be absolutely necessary. In the first place ventilation is not provided for at all. The rooms are heated by steam from pipes along the walls. No provision is made for the entrance of fresh air and no adequate avenue is afforded for the escape of foul air. Tin pipes pass from some of the water closets terminating above in the cold garret. No heated air is passed into these pipes and the draft, if there be any, is probably in the wrong direction. In the second place, a separate building for hospital purposes should be constructed. As it is there are no adequate means of isolating the sick from the well. We hope that our legislators will visit this institution and become acquainted with the great work that is being done there; then they can scarcely hesitate to appropriate the few thousand dollars necessary to render the instruction more complete and the condition of the buildings more favorable for the protection of the health and lives of the unfortunate deaf and dumb children of Michigan.

WHAT FARTHER PROVISION SHALL MICHIGAN MAKE FOR HER INSANE?—This is a question now of much importance to those interested in the welfare of these unfortunates. The asylums at Pontiac and Kalamazoo are admirably arranged, well managed and doing efficient work in every respect; but the trouble is, want of cubic feet of space. These asylums are already over-crowded; and to the question what shall be done, three answers have been proposed. These are: (1) Return the incurable to the counties; (2) Enlarge one or both of the asylums already existing; (3) Build a third asylum to which incurable or inveterate cases shall be assigned. The return of the patients to the counties would in our opinion be a sad mistake. In the majority of cases this would mean consignment to the county poor house, where the superintendant and even the medical attendant could not be expected to have the knowledge of mental science necessary to enable them to properly care for the insane. A few years ago many of the insane were kept in the county poor houses, it is true that in many of the counties separate apartments were prepared for the insane; but even in the best, the ignorance of the officers often occasioned much suffering among the patients. In one of these institutions, we once saw an insane man allowed to drink thirteen cups of coffee at one meal. In short, there was none of that competent supervision necessary in the management of the insane. We certainly sincerely hope that this plan will not find favor with our legislators.

As to increasing the size of the asylums already existing we think that the medical superintendants have as many patients under their charge now as they can well care for. The third proposal seems to us to be the one most likely to secure the greatest benefit to the insane.

SANITARY CONVENTION.—The Michigan State Sanitary Convention held at Flint, January 25 and 26, was even more successful in regard to attendance and general interest manifested than those of last year. The papers and speeches were as follows; Address of welcome, by Hon. Z. Chase, Mayor of Flint; Introductory remarks and statement of the purposes of the convention, by Professor R. C. Kedzie, of Lansing; Opening address, by Hon. George H. Durand, of Flint, president of the convention; Domestic sanitation, by J. H. Kellogg, M. D., of Battle Creek; Sewerage and its adjuncts, by Daniel Clark, M. D., of Flint; Intemperance as a cause of destruction of human life, by Mrs. E. Clark, of Flint; The relations of sanitation to christianity, by Charles H. W. Stocking, D. D., of Detroit; Some of the danger to health attending pioneer life, by A. W. Nicholson, M. D., of Otisville; Importance of domestic sanitation, by J. H. Jerome, M. D., of Saginaw City; Force value of foods, by V. C. Vaughan, M. D., of Ann Arbor; A new board of health for Detroit, by Henry F. Lyster, M. D., of Detroit; Forest trees as sanitary factors, by John S. Caulkins, M. D., of Thornville; Sanitary associations, by the Right Rev. Geo. D. Gillespie, of Grand Rapids; Pure air in our dwellings, by D. C. Jacokes, D. D., of Pontiac; Is the work done in our schools detrimental to the health of the pupils, by Professor M. T. Gass, of Flint. Dr. Mulheron, of Detroit, discussed disinfectants. Mr. Atwood, of Flint, exhibited an improved apparatus for preventing the escape of sewer gas into dwellings. By no means, the least interesting part of the proceedings was the general discussion of the papers. The cordial hospitality of the people of Flint was fully appreciated and will long be remembered by the delegates. The next convention will be held at Battle Creek sometime during the month of April.

THE TIRADE AGAINST SUPERINTENDANTS OF INSANE ASYLUMS.—The war against superintendants of Insane Asylums has in some quarters degenerated into a senseless tirade. The following paragraph from *The Churchman* must have been written by some one who was either wholly ignorant of the matter or who was intentionally malevolent. It is as follows:

"The insane subject is committed to the charge of the superintendants of these institutions, and placed practically under their absolute control. Their power has been not only without limit, but without responsibility. It has been vested in them to say who shall be the inmates of these asylums, what shall be the nature of the treatment given, how long the term of imprisonment shall last. They pronounce upon the reality of the disease and upon its cure. They have had all power but that of life and death, and for aught the public know, that power may have been practically theirs. A hundred and sixty rnd six thousand helpless human beings, bound hand and foot, have been consigned to the tender mercies of an authority that owes no allegiance to the people, and that gives no account of the exercise of its trust. Irresponsible power is always dangerous."

The statement that the Insane "bound hand and foot are consigned to the tender mercies of an authority that owes no allegiance to the people and that gives no account of the exercise of its trust" is certainly maliciously false. The trustees of our Insane asylums are chosen from the best men of the State and to these, the superintendant must report the true condition of the asylum. Besides, inspectors frequently visit such institutions and make thorough examinations of all their workings. No doubt some superintendants have failed to do their duty, but as a rule the medical officers of our Insane asylums are men of learning and integrity and the poor insane are far better off under the care of such men than they would be with their families.

As to the superintendants having in their power to say who shall be the inmates of the asylums, the statement is utterly without foundation, and the same can be said of the quoted paragraph as a whole. Indeed the senseless assertions must have found birth in a mind shrouded in pitiful ignorance or clothed with shameful malevolence.

CORRESPONDENCE.

MICHIGAN STATE BOARD OF HEALTH.

Reported for THE PHYSICIAN AND SURGEON.

At the regular quarterly meeting of this Board held on Tuesday, January 11, 1881, at its office in Lansing, the following members were present: R. C. Kedzie, M. D., President, of Lansing; Hon. Le Roy Parker, of Flint; Rev. D. C. Jacokes, D. D., of Pontiac; John H. Kellogg, M. D., of Battle Creek; and Henry B. Baker, M. D., Secretary.

VENTILATION.

Rev. Dr. Jacokes, committee on ventilation reported some experiments which showed that through registers of equal size, one at the top and the other at the bottom of the room, the velocity of the upper current of air outward was greater than at the lower register. When the ventilation was from the bottom only, the temperature of the room was higher than when the ventilation was from both top and bottom registers. These experiments, he claimed, demonstrated that ventilation should be from the bottom in this climate in winter. Dr. Kedzie reported the following experiment which seems to show the same fact. He took a glass tube thirty inches long having a thermometer in the lower end. When the tube was closed, and the upper end heated to 750° Fahrenheit, the thermometer now rose but one degree in an hour; the lower end of the tube being opened and air being drawn from it through the tube, the same heat being applied at the upper end raised the thermometer below over 100° in one minute.

Dr. Kedzie stated that in conversation with the newly-elected governor, he has seemed to appreciate the work done by this Board, and, in his message to the Legislature had recommended an additional appropriation of $2,000 for the uses of the Board.

LAWS DESIGNED TO PREVENT ACCIDENTS.

Mr. Parker, committee on legislation in the interests of public health, reported progress in the careful study of the laws relating to punishment for carelessness causing accidents, such as the falling of the "grand stand" at Adrian, and said in his opinion the laws are stringent enough now, but the sentiment of the people does not hold a man guilty of murder through an act of negligence. There was no law, however, requiring expert inspections of public buildings constructed or in course of construction. Mr. Parker also reported on a proposed system of

INSPECTION OF STEAMBOATS

and other sailing vessels on our many inland lakes and streams, at summer resorts, etc. He had prepared a bill providing for such State inspection, and he was requested to take measures to have the bill presented to the Legislature.

THE WORK OF THE OFFICE.

The secretary's quarterly report of work, mentioned the preparation of diagrams and other labor in preparing and printing.the Report of the Board for 1880, and similar work on two volumes of vital statistics; the distribution of documents published by the Board, and of blanks for return reports; and preparations for the sanitary conventions to be held, under the auspices of the Board; five hundred and fifty-three communications have been written during the quarter.

ADULTERATION OF SUGARS.

The secretary reported that he had collected samples of sugars and syrups from the leading dealers in the city, and had received from Professor S. P. Sharples, of Boston, the result of his analyses, which showed that the sugars were mostly not adulterated. and but two out of ten of the syrups. It is due to the dealers to state that those found to be adulterated, were so sold by them, namely, as "corn sugar" syrups, "glucose" syrups, etc.

DIPHTHERIA.

Dr. Kedzie mentioned a horrible superstition prevalent in Russia, under which a wafer is put into the mouth of a child suffering with the disease, and then into the mouth of a well child, with the idea that it is a protection against the disease. As it is a communicable disease, it would be difficult to devise a more certain mode of spreading it.

POISONOUS JELLY.

A sample of apple jelly was sent to the secretary with the statement that eating of the jelly had caused the sickness of a large family. Dr. Kedzie had analyzed it and found three grains of sulphate of zinc to each ounce of the jelly. It was probably in the form of malate of zinc, formed by the action of the acid of the fruit on the galvanized iron vessel in which it was boiled. If this was the fact, it illustrated the danger of using such vessels for such purposes.

YELLOWS IN PEACHES.

Dr. Kedzie reported an examination of peaches affected with the yellows. They were of fine appearance, rather red, especially about the pit. The meat was watery and decomposed rapidly. Chemical analysis showed excess of water and deficiency of sugar and jelly-forming material. He read letters from some who thought eating the peaches was not injurious to the health, and from others who stated the facts of sickness in repeated instances, after the eating of such peaches.

"HOG CHOLERA."

Dr. Baker made a report as special committee to study the relations between the prevalence of "hog cholera" and the public health. His report included a statement of his trip to the south-western part of the State where the disease prevailed, and numerous letters from farmers, physicians, and veterinarians, among the latter Professor Law, Professor Klebs, and Drs. Detmers and Salmon. A letter from Dr. Jerome, of Saginaw, stated that he saw hogs suffering with the disease, which were unable to go up the inclined plane at the slaughter houses in Chicago, were killed and made into lard, and stamped with a fancy brand. In this same connection, Dr. Baker spoke of

LARD WHICH CAUSED SEVERE SICKNESS

in a family in Lansing. A sample of the lard had been microscopically examined by Dr. Detmers, of Chicago, who sent drawings of the organisms he found in it, stating that they were the same as he had found to be the contagious principle in "hog cholera," sometimes called "swine plague." He also read a letter from Dr. Marshall, of Lansing, which said he had examined a sample of the lard in which the "fried-cakes" (eating of which caused the sickness) were cooked, and had found the same organisms to be present. Dr. Baker also read a part of a letter from Professor Klebs, of Prague, Austria, relating to the same subject. Professor Klebs has made a special study of such subjects, and claims to have found the organism, which is the specific cause of typhoid fever. He does not think hog cholera to be the same as typhoid fever, but would like material with which he could carry on a comparative study.

A vote of thanks was extended to those citizens who had labored so hard to make the

SANITARY CONVENTION AT FLINT

a success. The convention will be held on January 25 and 26, 1881.

Dr. Baker stated that

CONTAGIOUS DISEASES PREVAIL MOST

where it was noticable that the local authorities paid little or no attention to the laws requiring the appointment of a health officer, and communication with this Board.

The Board adjourned to meet at Flint, January 25, 1881.

TRANSLATIONS.

Translations from French Journals for THE PHYSICIAN AND SURGEON.

BY P. E. NAGLE, M. D.,

Assistant to the Professor of Pathology and Practice of Medicine, and Assistant in Qualitative Chemistry in the University of Michigan.

LATENT ULCER OF THE STOMACH: TRANSFUSION OF BLOOD.

Simple ulcer of the stomach is almost always accompanied by the three characteristic symptoms, peculiar pain, vomiting and hæmatemesis. But it does not often happen, as in the following case, that a patient who has lived on to all appearances perfectly indifferent to the existing ulcer, is at a moment attacked by a terrible and rapidly fatal hæmorrhage, in the presence of which medical and even surgical aid stands apalled and powerless. The case here described is one which the author met every morning in his rounds through the hospital without in the least suspecting the imminent danger of the apparently healthy man.

The patient M., age thirty-one, was a married man and the superintendent of the male wards of Laënnec hospital; he lived a sober and regular life and had for some months performed the duties of his office with promptness and zeal. In my visits to the hospital I had for sometime noticed that the superintendent was paler than usual and somewhat emaciated, still as he made no complaint, and continued to perform the work incident to his position, I attributed his diseased appearance to overwork—consequent fatigue. Such were the conditions when on the 11th of April, 1880, the patient was attacked by malaise, cephalalgia, vague thoracic pains and lassitude. I then examined him and found his tongue coated, the skin generally pale, and pulse small and rapid; at the base of the left lung, some moist rales were perceptible. He told me that he had vomited some blood in 1870. I advised him to cease his work and go to bed and take an emetic dose of ipecac.

Two days afterward, the 13th of April, the patient vomited blood. The intern in charge was immediately on hand and ascertained that the blood was not spumous. On auscultation he found that there were mucous rales at the base of the left lung. The quantity of blood lost in a few minutes was about a litre. Notwithstanding the fact that the blood was not frothy and because the rales were more numerous than on the preceding day, we were inclined to think that we had to do with an enormous, rapid hæmoptysis caused by the ulceration of a large pulmonary vessel. The patient *asserted that he never had any gastric trouble.* In consequence of the loss of blood the palor of the face became more marked, and of a somewhat greenish tinge; he had no fever and *his appetite remained good.* The cough continued and was followed by a mucuo-purulent expectoration that was not colored by blood. At no point on the chest could dullness be detected; in the lower half of the lung on its posterior surface, there were still numerous mucous rales; there was no cardiac murmur. We feared the onset of tuberculosis.

For a few succeeding days the patient's condition remained unchanged. There were cough, intense palpitations, *conservation of the appetite*, increasing palor and frequent attacks of syncope. On the 20th of April, the patient vomited a blackish fluid composed of a small quantity of uncoagulated blood, mixed with the contents of the stomach and black clots that resembled lung tissue. The vomiting was followed by syncope. When the patient could be interrogated it was ascertained that he had passed some blood with the stools on the preceding day.

Notwithstanding the nature of the vomit mixed with old and black clots, the presence of black blood in the stools, the persistance of the pulmonary signs, there was still a possibility that the blood in the alimentary canal had come from the bronchi; so judgment was suspended and the patient was removed to a place where he could be more carefully watched. On the next day the patient was found to be very pale and his pulse was small and very frequent. He did not complain of any pain in the epigastrium, nor was the abdomen painful on pressure. The pulmonary symptoms were the same as on the preceding day. The treatment was perchloride of iron, sulphuric acid lemonade, iced milk, ice, and subcutaneous injections of ergotine. At 1 o'clock in the afternoon, the patient vomited from three hundred to four hundred grammes of blood which was almost pure and was recognized as certainly coming from the stomach; in consequence of the loss of blood the patient was very weak and syncope was imminent. Ice was applied, subcutaneous injections of ether, and of ergotine were resorted to. Rectal injections of wine and broths were also administered. At 4 in the evening the patient vòmited again, this time the blood was black, having been coagulated by the perchloride of iron. The quantity of blood vomited was not as great as on the preceding occasion; the treatment was continued. The diagnosis was now no longer doubtful, and it was evident that we had to deal with a simple ulcer of the stomach, probably recent, and that the pulmonary symptoms were of a non-tuberculous nature, constituting an intercurrent complication of little significance.

On the 22d of April the palor and feebleness were extreme; the voice was almost inaudible and movements were performed with difficulty. The stomach was distended and dull on percussion. The patient experienced a sense of weight in the epigastrium and respiration was much impeded. About two o'clock, hematemesis occurred again and this time there were ejected about four hundred grammes of blood. The feeling of weight was relieved by the vomiting. Treatment the same; bag of ice on the stomach; internally perchloride of iron; sulphuric acid lemonade, and ice; subcutaneous injections of ether and of ergotine; rectal injections of nutritive broths, wines, etc. At 9 in the evening forty grammes of a liquid resembling coffee grounds were vomited; one of the rectal injections caused a stool which was composed of black blood mixed with fecal matter. A light delirium now supervened; the pulse was very feeble. On the 23rd of April, the anæmia was increased, the enumeration of the blood corpuscles showing that there were only 784,375 red globules in a cubic millimeter, and the feebleness was so great that it was decided to perform transfusion, notwithstanding the fact that there was no renewal of the hæmorrhage. At 8 o'clock, M. Nicaise, the hospital surgeon, proceeded to perform the operation, the gardener of the hospital consenting to furnish blood. The apparatus of M. Collin was used and the operation was going on successfully, the surgeon having already introduced about eighty grammes of blood into the patient's arm, when the gardener who was considerably frightened fainted, and the operation was suspended. The patient did not experience the feeling of improvement usual in such cases, but the skin lost its cadaveric palor and the bluish gums became of a redder color. There was a slight cerebral excitation, and a sensation of heat at the surface following the operation. The applications of ice and the internal administration of perchloride of iron were continued.

Two hours after the operation, the patient was greatly excited, and it required four men to hold him in bed. At this moment he cried aloud, and complained of violent pains in the stomach, at the end of a quarter of an hour he became quiet again. In the evening there was another access of cerebral excitement, delirium, and severe pain in the extremities, but no vomiting. The stomach was very much distended. The excitement soon abated but recurred again. The patient again became quiet, uttered some agonizing cries and died in a few minutes.

Autopsy (*thirty-six hours after death.*)—After death about two small wash-basins full of a black fluid flowed from the nostrils. At the time of the postmortem examination the cadaver was in an advanced stage of decomposition; the skin was green, striated by broad black bands, and raised in some places by a horribly fetid gas. On opening the chest, section of the vessels yielded but little blood. The lungs were in such a stage of decomposition that it was impossible to define the lesions corresponding to the mucous rales heard during life in the inferior left lobe. There were no tubercles, nor obstructions in the pulmonary vessels, at least none that could be observed with the naked eye. Both lungs were very pale.

The heart was flabby and pale; marks of an old endocarditis were found and the borders of the mitral and aortic valves were thickened and covered by small projecting warty growths. The *aorta* was atheromatous. The *kidneys* were pale and putrified. The *liver* was bloodless. The *stomach* was adherent by bands of peritoneum to the left lobe of the liver and its lesser curvature was intimately connected to the liver by fibrous tissue, the result of an old perihepatitis. Fibrous bands also united the stomach to the spleen. The viscera itself was carefully opened, but contained nothing but a small quantity of a black liquid. The mucous lining was decomposed to such an extent that it was impossible to determine any superficial lesions. It was infiltrated by an infectious gas, and in consequence of this submucous emphysema, it had the aspect of frogs' eggs. However, we found an ulceration, which was easily discernible, a little below and to the right of the cardiac orifice. The ulcer was from four to six millimeters deep, its edges were well defined and abrupt, it was oval in shape, its longest diameter being not less than six millimeters and its short diameter three. The base of the ulcer was directed toward the liver from which it was separated only by a layer of hard fibrous tissue about two millimeters thick. Around the orifice of the ulcer the mucous layer of the stomach to the extent of about a millimeter and a half was thick and hard, and externally the corresponding portion of the stomach was firmly adherent to the liver. By injecting blue aniline we endeavored to discover the origin of the hæmorrhage, but the liquid did nct penetrate the specimen. However, as we were able to trace out the *coronaria ventriculi* to the vicinity of the ulcer it was concluded that one of the large branches of this artery was involved in the ulcer and gave rise to the hæmorrhage.

Here was a temperate man, but who perhaps had not always been so, who had a very large and very old ulcer of the stomach without any symptom, prior to the hæmorrhage, indicating its presence. The ulcer appeared to me to be old because of its regular oval outline, its depth, the adherences it had contracted to the liver, the abundant hæmorrhage which came from a large vessel that was not affected until all the tunics of the stomach were ulcerated through, and finally, because ten years before the patient had vomited blood.

There was no pain either following the ingestion of food or accompanying digestion; no pain was caused by pressure; there was no vomiting nor any of the dyspeptic phenomena which usually accompany simple ulcer; in fact, if we except the hæmorrhage in 1870, there was nothing prior to the day on which the first great hæmorrhage occurred, to indicate the presence of the lesion.

The palor which was attributed to the exhausting work which comprised the patient's duty, was probably due to hæmorrhage into the stomach, the amount of blood not being sufficient to cause vomiting, and it therefore passed away with the stools.

Finally, a word on the possible etiology of this ulcer of the stomach. It has been stated that the autopsy demonstrated the previous existence of a valvular endocarditis. Is it not rational to suppose that an emboli from these diseased valves, passing into a branch of the *coronaria ventriculi* may have caused a partial gangrene of a portion of the stomach, and the formation and falling off of an eschar, and that the incident irritation caused the adherence of the stomach to the liver, these pathological changes coinciding with the hæmorrhage which had occurred in 1870, and that since that time the progress of the lesion had been slow, becoming grave only when its insidious progress had resulted in the rupture of a vessel of considerable caliber?—Dr. A. Legroux in *Archives Génerales de Médicine.*

Translations from Russian Journals for THE PHYSICIAN AND SURGEON.

BY RALPH D'ARY, M. D., ROMEO, MICHIGAN.

NEPHROTOMY AND NEPHRECTOMY.

These operations, though they had been under consideration in the ancient times, have been undertaken only recently, and hardly at all prior to 1869, when Professor Simon successfully removed a man's kidney, in consequence of incurable fistula of the ureter.

Lately Professor Heinicke has published in Pitha and Billroth's Course of Surgery, an article on this subject, which is very valuable and full of new ideas.

He proposes to augment the number of the usual normal (official) operations, by the two new ones named above. *Opening of the kidneys, or nephrotomy*, is practiced for the purpose of removing from the pelvis of the kidney, either calculi, pus, or retained urine. The operation is performed through the lumbar region. When the pelvis of the kidney is of normal dimensions and in its proper position, it is impossible to reach it from behind without cutting through the substance of the kidney, but the kidneys are so rich in blood-vessels that a cut must necessarily cause considerablehemorrhage, which it is very difficult to arrest, in consequence of the deep location of the organ. Therefore, an opening of the renal-pelvis in this manner is impracticable.

But it is different when the pelvis is distended with pus, or with pus and retained urine, when, upon reaching the kidney we find a similitude of a cyst, easily recognizable by its fluctuation, and which pushes the kidney itself upwards. If, however, the body of the kidney forms a part of the walls of the cyst, it is generally so much atrophied, that it may be cut into without danger.

Therefore, opening of the renal-pelvis is indicated when it is necessary to remove from it calculi, pus, or sero-urinary fluid, and when it is possible to reach it without danger of wounding the kidney itself, *i. e.* when the pelvis is considerably distended.

The presence of calculi in the renal-pelvis often produces pyelitis, in consequence of which the pelvis may be filled with pus. This may be caused also by catarrh of the bladder, lengthy retention of urine from stricture of the urethra, and acute exanthemata. In these cases abscess of the renal-pelvis is formed, which may be diagnosed by the dull pain in the region of the kidneys, with occasional exacerbations and vomiting, the urine containing pus, and generally having an acid reaction. There is fever, with increase of temperature, especially towards night. The symptoms are accompanied by others, if calculi are present in the renal-pelvis, *i. e.* the usual pains, with blood and "gravelly" urine. These pains may be caused by only one other affection—the long-continued occlusion of the ureter by polypi.

When these conditions have continued for some time, suppuration gradually extends to the kidney itself, destroying its tissue and converting the whole organ into an abscess. If the suppuration from the kidney spreads to the surrounding tissue, deep lumbar abscesses are formed, which burrow backwards and into the pelvis, or into the abdomen and thorax. The longer this process continues the smaller are the chances for a favorable termination, and the patient, gradually growing weaker from suppuration and hectic, dies from exhaustion or from pyæmia or septicæmia.

In such cases it is reasonable and presumably useful to open the nephritic abscess. This operation is indicated when the suppuration and weakness increase, and when the abscess, known by the pain and fluctuation, may be diagnosed posteriorly, per rectum, or through the abdominal walls. If calculi are found in the cavity of the abscess, they should also be removed.

When the presence of pus in the nephritic pelvis is beyond a reasonable doubt, the operation of opening the abscess should be undertaken, though fluctuation may not be felt. . . . . The operation is, of course, still more urgently called for when the whole kidney is converted into a pouch full of pus. After the opening of such an abscess, it is necessary by means of the finger or a probe, to search for a communication between it and the nephritic pelvis, and if this passage be small, to widen it, in order to ensure free drainage from the abscess.

When the serous or purulent tumor of the kidney, or its pelvis has attained such a magnitude that it may be felt immediately under the anterior abdominal wall, it will be right to remove it through the antero-lateral side of the abdomen. But in the early stages of these tumors preference should be given to the operations from behind. The removal or extirpation of a kidney (*nephrectomy*) is to be thought of only when its fellow continues its function without impairment. It is indicated (1) in cases of nephritic hemorrhage dangerous to life, (2) in suppuration of the kidney threatening to become fatal from exhaustion or septicæmia, if nephrotomy either is impracticable or has not had the desired result, (3) in case of adventitious tumors of the kidney, (4) in case of incurable fistulæ of the ureters.

H. affirms that nephritic hemorrhage is sometimes so severe that it may threaten life. But this statement does not apply to hemorrhages caused by blows or concussions—(traumatic hemorrhages) for these are easily arrested, because the coagula which form in the infundibula and pelvis act as tampons even when the larger branches of the renal vessels are torn. For this reason the majority of the so-called subcutaneous injuries of the kidneys (*i. e.* not caused by external penetrating wounds) have a favorable termination, even if repeated and accompanied with hemorrhage. But it is different, when the nephritic hemorrhage is caused by punctured wounds or cuts, when the knife or dagger was thrust into the kidney from behind, and the blood gushes from the cut vessels and out of the kidney. In that case the coagula do not fill up the nephritic pelvis, and therefore do not occlude the injured blood-vessels. In such a case even slight delay is often the cause of the patient's death, and it would, therefore, be necessary immediately to ligate the renal vessels at the hilum. But as by this means, the kidney's blood supply is cut off, it must die, and therefore will have to be removed. Sometimes it might be more convenient at once to commence the removal of the kidney, and ligate the vessels at the hilum as the last act of the operation.

If nephrotomy is insufficient, in cases of extensive and prolonged renal suppuration, threatening life by exhaustion or pyæmia, nephrectomy is called for. Yet nephrotomy would be sufficient when the abscess is located especially in the renal-pelvis, or has reached the capsula fibrosa. There are cases, however, when the whole, or the greater part of the kidney is sound and contains the abscess, the pus burrowing in its substance, forming cavities and communicating fistulæ between them. Under such circumstances, on general surgical principles, nephrectomy should be resorted to, especially if the suppuration is the consequence of a blow, a concussion, or other subcutaneous (internal) injuries. If however, the pus is the result of a primary pyelitis, extirpation should *not* take place, as in that case *both* kidneys are affected and it would be useless to remove one and incompatible with life to extirpate both of them.

In 1871 Professor Bruns removed a kidney for dangerous suppuration, following traumatism. It had, however, formed so many adhesions with the neighboring tissues, that only its convex part could be removed whilst the remainder was left *insitu*, the renal vessels having been ligated. The patient died on the day following the operation.

It was stated above that the kidney may be opened for calculi in its pelvis, but only if the latter is distended. When, however, it is not distended, yet life is endangered from the presence of calculi, it is proper to consider the entire removal of the kidney. But this operation is so dangerous, that it is seldom indicated; possibly when exhaustion sets in, when the other kidney is in danger of becoming affected or when secretion of urine becomes impossible from putrefactive changes of the kidney.

Bayer has suggested the possibility that renal calculi may cause such intimate adhesions of the kidney with the surrounding tissues, especially the peritoneum, that extirpation may be rendered impossible. But Simon has proved the groundlessness of these apprehensions.

The difficulty of diagnosis is a great inconvenience. In 1870 Gunn was about to perform nephrectomy on account of calculi, of whose presence he was convinced. But when he reached the kidney, he did not find any calculi. Peters has extirpated a kidney for supposed calculus, but found that it contained tuberculous deposits. These cases prove that the diagnosis of lithiasis renalis is not an easy matter, especially when it is taken into consideration that even after the kidney is laid bare, calculi though present, may not be discovered, owing to their small size. When the calculi may be felt through the abdomen or rectum, the diagnosis is more certain, as it is also when pains in the kidney are followed by gravelly deposits in the urine. But even in these cases it is often difficult to make out whether the other kidney is sufficiently healthy to warrant the removal of the affected one. Only the following co-existence of symptoms may give an assurance that one kidney is sound. Pain in one side, tenderness of the same side on pressure, and *especially* a clearing up of purulent urine after renewed pain in the kidney—this clearing up being the result of the retention of the pus in the affected kidney by calculus in the mouth of the ureter.

When the kidney is laid bare, Simon advises to introduce a needle through its substance in order to confirm the presence of calculus. In 1871 he had proceeded to perform extirpation of a kidney, presumably containing calculi. . . . . . But when the affected organ was reached, tactile examination did not reveal any. The kidney, nevertheless was removed, and in it were found eighteen calculi. The patient progressed well during the first twenty-four hours, but died from pyæmia on the thirty-fourth day.

Cancer and sarcoma of one kidney render its extirpation very desirable, but diagnosis, generally, is only possible when the tumor has attained a considerable size and may be felt through the abdomen. In this case, it would be necessary to operate from the latter. Only one case of removal of a tumor through the lumbar region is known. . . . .

In cases of urinary fistula of the ureter, the disgusting uncleanliness produced by the constant dribbling away of the urine, is generally so unendurable to the patients—mostly women, that they prefer the risks of so dangerous an operation. . . . . . . In these cases the kidney, of course, may be quite sound, and the sudden removal of a perfectly healthy organ, performing its functions promptly, is only another element of danger. On the other hand, the operation itself is much easier to perform. Simon has twice removed a kidney for fistula, and with perfect success. Special directions for the performance of the operation will be given in the next number of THE PHYSICIAN AND SURGEON.—*Sovr. Med.*

JUNIPER POISONING.

Dr. Ivan Godnef describes a case of poisoning by a strong decoction of about fifteen ounces of juniper berries, taken by a hospital servant, on his own responsibility, for fancied œdema which did not exist, and rheumatic pains. We translate as much of the article as illustrates the toxic effect of the drug.

One hour and a half after drinking the decoction V. experienced great prostration and difficulty of breathing. The quantity of urine was normal, the patient conscious. The dyspnœa gradually increased. In two and one-half hours the face appeared slightly swelled and red, but did not pit on pressure with the finger. The patient could scarcely walk. In four hours he had considerable vertigo and severe dyspnœa, but was conscious. Was considerably cyanotic. The face was œdematous, also the thorax and feet, the latter slightly. The pulse was weak, the urine abundant. All these symptoms increased in severity towards night (six or seven hours after drinking the decoction), and the patient died.

Results of Postmortem.—The face, neck, and upper part of the body were of a dark purple color. Upon section of the skin there exuded from it a considerable quantity of rather clear fluid. The abdomen is quite œdematous, the feet but slightly so. The bones of the cranium were unusually red; the pia and dura matres were highly hyperæmic; the brain presented isolated spots of excessive hyperæmia, alternating with regions of slight serous infiltration, but no extravasations. The heart was normal, and distended with liquid blood. The lungs had collapsed, but very slightly; they were highly hyperæmic, the lower lobes being also œdematous. The pleura and pericardium contained some fluid. The spleen was not enlarged; the liver was hyperæmic. The kidneys were but slightly hyperæmic; the bladder contained about nine ounces of urine. The bowels were distended with gas. Otherwise the internal organs were normal, and no other cause of death could be assigned than the effect of the juniper.—*Med. Vestnik.*

BLOODLESS AMPUTATION OF THE BREAST.

Dr. Stoukovenkof has practiced bloodless ablation of the breast by means of an apparatus of his own invention—a compressor, consisting of two nearly parallel, slightly curved, metal rods, of the thickness of a pencil; one is movable, thus allowing of its approximation to, or removal from its fellow, by means of a screw. For the operation the compressor is placed on the breast in such a manner that one rod is above, the other below, the *mamma*, after which the rods are brought closer together. The compression produced with this instrument is quite sufficient to prevent the flow of blood. He has used this instrument in twenty-four operations, of which number of cases two died, but not in direct consequence of the operation. (Leisrink describes an identical apparatus in Number XXX of the *Centralblatt f. Chirurgie*, 1880). Dr. S., however, has used his instrument over two years, and in October, 1879, had exhibited it to the Moskow Surgical Society.—*M. Obozr.*

EXCESSIVE TOPICAL PERSPIRATION.

There are not a few people, who enjoy good general health, but are, nevertheless, annoyed by an unpleasant excess of perspiration of the palms, the whole hands, or the feet. Dr. L. Gordon has made experiments on seven cases of this kind, with the view to ascertain (1) the state of sensibility of the skin, covering the parts affected, by means of Weber's compresses and the electric current, (2) the local temperature of those parts, and (3) the influence of Faradization on their perspiration, temperature, and irritability. He found that æsthesis and temperature were both below the normal point, but that systematic Faradization soon restored them to a normal condition, lessening the abnormal perspiration in two cases, and entirely curing the troublesome excess in five.—*M. Obozr.*

CLINICAL REPORTS.

GLEANINGS FROM ANN ARBOR CLINICS.

Reported for THE PHYSICIAN AND SURGEON.

BY P. E. NAGLE, M. D.,
Assistant to the Professor of Pathology and Practice of Medicine, and Assistant in Qualitative Chemistry in the University of Michigan.

SCIRRHUS CANCER OF THE LIVER.

M. H. Flynn, a wagon-maker, age thirty-eight, entered the University Hospital September 13, 1880. He had always worked hard and, save some slight indigestion and repeated attacks of ague, he had always been strong and well. There was no history of hereditary taint. His father, now seventy-five years old, is still living, and his mother died at the change of life of an unknown disease.

About the middle of May, 1880, he experienced a feeling of soreness in the abdomen, which became at the same time somewhat enlarged. The patient still continued his ordinary vocations, but his abdomen becoming sorer and his appetite failing, he went to the Sanitarium, at Battle Creek, Michigan. Up to this time he had had but little treatment, and his disease had been variously named. The doctors at the Sanitarium told him that his liver was enlarged, and treated him with fomentations, baths, electricity, diet, etc. His bowels and appetite, which had been very much deranged were improved by this treatment, but his abdomen continued to enlarge.

Present Condition.—The patient when examined in the hospital was much emaciated, and quite weak, though still able to walk around the ward. The liver was found to be hard, nodulated and enlarged, filling almost the entire abdominal cavity. A slight depression, supposed to be the longitudinal fissure of the organ was found to be a couple of inches above the iliac crest, and on a line with the left anterior superior spine of the ilium. There was some ascites and the lower extremities were slightly œdematous. The temperature was normal, pulse 72, bowels regular. The tongue was red and fissured; there was considerable thirst and the appetite was fair. There was but little pain in the affected region. The patient was unable to lie on his back or side, and the only way he could obtain rest, was by being supported in a position midway between the dorsal and lateral decubitus.

Diagnosis.—Dr. Herdman, who had charge of the case, diagnosed scirrhus cancer of the liver.

September 14: The patient was restless on the preceding night, and his sleep was light and interrupted. After the administration of an opiate he slept well and felt quite refreshed, but he was so weak that he could not maintain the upright posture for any length of time.

September 15: The patient could sleep only with the aid of opiates. His urine had to be drawn with a catheter. Syrup of iodide of iron and nitro-hydrochloric acid were now prescribed, but it was evident that the case was hopeless, and that the patient was fast nearing his end. He died at noon on the 20th of September.

Autopsy.—The abdominal wall was tense and its cavity was almost completely taken up by the hard and enlarged liver, which weighed twenty pounds and a half, and was fifteen inches wide, six inches thick and fifteen inches long. The surface of the liver was nodulated and of uniform firmness. The right lobe, which was adherent to the eight and ninth ribs, and to diaphram throughout its entire surface, projected backward, displacing the spleen, dipped down into the iliac fossa. The pressure which the enormously enlarged organ exercised on the stomach and duodenum must have been very great. The lobus caudatus was soft and medullary. The gall-bladder was moderately distended, but its excretory duct was not occluded, except in part, by the pressure of the enlarged liver.

The left *kidney* was greatly enlarged, the cortical portion congested, and the pyramids standing out prominently. The right kidney which was almost circular in shape, was paler in color than the left, and flattened antero-posteriorly.

The *spleen* was not enlarged, in fact, it was somewhat contracted, but the rugæ which covered its surface seemed to point to a former enlargement. The right suprarenal capsule was entirely atrophied, and the left was flattened and contracted.

The pancreas was atrophied, the tail being represented by only a few nodules, and the entire organ was pale and almost bloodless.

The ureters were somewhat distended and the walls of the bladder were considerably thickened.

The liver was examined microscopically by Dr. Herdman, and the following facts were elicited:

"The enlarged dimensions of the organ was, for the most part, due to numerous fine white nodules, varying in size from a pea to a walnut, partly imbedded in the substance of the liver and partly projecting above its surface. These growths in their development had transformed and pushed aside the normal structure of the liver in many places, causing atrophy of its tissues by obstructing the nutrient vessels.

"The tissue between these nodules was frequently found infiltrated with a connective tissue growth, at the expense of the liver cells, and by this means many of the nodules above mentioned were joined together. The abnormal growth was confined for the most part to the periphery of the organ the interior maintaining its normal appearance and evidently its function was unimpaired.

"Upon examination the interior of many of these nodular growths, especially in those of largest size, the center presented a softened, broken down material, caseous and purulent in character, showing that the neoplasm by its rapid development had cut off its own nutrition and caused degeneration of its structure.

"A microscopical examination of these nodular prominences showed them to be largely composed of a stroma consisting of short, blunt-ended, spindle-shaped cells, with elongated and clearly defined nuclei and prominent nucleoli, this stroma inclosing occasional nest-like deposits of rounded-cells, irregular in size and outline, the nuclei and nucleoli of which were likewise distinctly defined. The contents of the majority of these cells both spindle-shaped and circular, was made up of granular matter and minute oil globules. When the substance of the organ between the nodules was infiltrated with the new growth, its structure corresponded to that composing the nodules.

"As far as could be determined, the morbid process seems to have taken its origin in the connective tissue composing the capsule of Glisson, which surrounds the vessels and ducts of the organ—and the minute branches of the portal vein and hepatic duct were often encroached upon, and their coats involved in the morbid growth.

"The microscopical characters of the neoplasm determined it to be a true carcinoma, recent in development and of low vitality. The comparative infrequency of primary cancer of this organ, and the abundant evidence that numerous points upon the periphery of the organ became simultaneously affected, are strong indications of its being a growth of secondary origin, in spite of the negative evidence of a well determined primary lesion.

"Primary lesions of this nature are oftentimes so insignificant compared with the secondary developments to which they give rise, and their seat so frequently obscure or remote from the organ secondarily affected, that they may be easily overlooked.

"In the case of this patient as far as observations extended and the history revealed, no such primary focus was discovered unless it was to be found in a suspicious looking, dark-colored, nodular growth to which my attention was directed upon the left temple, and which the patient stated had been twice removed. But unfortunately this was not preserved so as to be subjected to a microscopical examination."

SELECTED ABSTRACTS.

REPORT OF THE COMMITTEE FROM AMERICAN PUBLIC HEALTH ASSOCIATION ON A PLAN FOR THE PREVENTION OF THE SPREAD OF VENEREAL DISEASES.

BY ALBERT GIHON, M. D.,
Medical Director United States Army, Chairman.

Your committee, to whom was assigned the duty of suggesting some practicable plan for the prevention of the spread of venereal diseases, with especial reference to the protection of the innocent and helpless members of the community, beg to report:

That they have endeavored to consider the question without bias or prejudice, uninfluenced on the one hand by the misrepresentations of certain pseudo moralists, who have uncharitably denounced in advance their assumed intention to recommend the governmental license of prostitution, and on the other, by appeals from no less earnest, honest and righteous persons, who, with equal insistence, have urged the propriety and necessity for just such action.

Manifestly the just essential to the successful establishment and operation of any system of repression or prevention, is the recognition by the community of the magnitude of the danger it is incurring without it. Diphtheria and typhoid continued to commit their ravages with a sad submission to what was supposed to be the will of an inscrutable Providence until the public learned that their homes were desolated through their own culpable carelessness. To-day, syphilis lurks in the most exemplary household, defiles the parents and blights the offspring, its very name being unknown to them. Until the public are taught that where personal rectitude is no safeguard, it is idle to expect that any system will be cordially indorsed; so long as venereal disease is popularly believed to be only the fruit of illicit sexual intercourse, its very consideration will be shunned. The public must, therefore, be enlightened, and your committee beg to remind this association that this task is eminently its duty as to the existence in their midst of a disease which is fraught with more evil to humanity than all other ills of the body combined. The other great scourges of mankind are occasional, like cholera, or limited by climatic bounds like yellow fever, or outwardly hideous and terrifying like small-pox; but syphilis spreads its venom invisibly, insidiously, daily throughout all seasons; in every land and among all races and conditions of people.

Certain individuals—few of them physicians—have disputed the statement that syphilis is either very common or so dangerous that it is beyond speedy and permanent cure. In the absence of exact numerical statistics, your committee believe it will be sufficient to refer to the experience of these medical practitioners who have had opportunities of judging, confident that they will, without exception, declare with Parent Duchatelet that "of all contagious diseases to which the human species is liable, and which cause the greatest evils to society, there are none more serious, more dangerous or so much to be dreaded as syphilis; its ravages far surpassing those of all the plagues which at different times have terrified society."

With Professor Gross and Dr. Marion Sims, that "a greater scourge than yellow fever and cholera and small-pox combined is quietly installed in our midst, sapping the foundations of society, poisoning the sources of life, rendering existence miserable and deteriorating the whole human family."

With Sir Thomas Watson, that "it counts its victims not only in the ranks of the vicious and self-indulgent, but among virtuous women and innocent children by hundreds and thousands."

With Sir James Paget, that "it would be difficult to overstate the amount of damage that syphilis does to the population, children being born with diseases induced by it, which render them quite unfit for the work of life."

With other eminent medical men quoted by Dr. Sims, in his inaugural address, as president of the American Medical association at Philadelphia in 1876, Sir William Jenner, Prescott Hewitt, and Mr. Simon, chief medical officer of the privy council, who have borne testimony of their experience of its ravages among pure women and innocent children.

Statements such as these do not need to be backed by numerical data of questionable value. These can often be distorted to prove any point desired by selecting for comparison maximum and minimum years—special returns from certain localities—as illustrated by the array of figures by which the opponents of the British contagious diseases act have sought to prove that the sanitary surveillance of public women has actually augmented the amount of veneral disease in countries were it is exacted.

At best but a small proportion of the venereal diseases ever appears on vital returns. The true statistics of their frequency are the professional secrets of the physician whose aid is sought to relieve them, or whose eye recognizes them beneath the mask of other ailments. The most carefully prepared reports fail to exhibit the rheumatisms, the cahecxiæ, the cutaneous affections, the defects of vision, the lesions of the spinal cord, the brain, the hair, which have had syphilis for their cause. Especially is this true of transmitted syphilis. Only a few days ago a distinguished American ophthalmologist declared to one of our committee that the majority of his infant patients were characterized by the oldish features and notched incisors and badly shaped head which mark the syphilitic child, and he boldly asserted that interstitial keratitis was always a consequence of constitutional contamination. The greater proportion of venereal cases stalk about the streets in affected health and never appear in any returns. How many others find expression in suicide, in insanity, in conjugal infidelity and actions for divorce!

As far as figures can be evidence, the statistics carefully collated by Dr. Frederic R. Sturgis, of New York, are worthy of consideration. A summary of the poor treated in 1873 at the various hospitals and dispensaries of the city of New York enabled him to estimate the total number of venereal and syphilitic poor patients, but this did not include those treated at their homes, often by themselves, at physicians' offices, by apothecaries and by quacks. Notwithstanding these omissions, of 280,536 poor persons receiving aid at public institutions, 12,341 suffered from venereal diseases, 5,045 of these being syphilis; that is, 44 in every 1000 were venereal cases, 18 per 1000 syphilitic.

In Mr. Wagstaff's report of the amount and kind of venereal disease under treatment at certain charitable institutions in London in the year 1868, it is stated that sixty-nine in every thousand patients were venereal, thirty-five of these being syphilitic; and he estimates that among the 1,500,000 of poor population of the metropolis, who received medical relief for disease at hospitals, dispensaries and at the hands of parochial medical offcers, about one in fourteen is affected with venereal disease of some kind, this not including midwifery cases nor the classes excluded in Dr, Sturgis' report.

During the same year 9796 venereal patients were treated at the hospitals in Paris, and M. Lecour, prefect of police, estimating these as one-fifth of the total number of venereal patients treated at their homes by physicians and who seek relief at the hands of apothecaries and charlatans, gives a sum total of 48,980 cases, about one in forty of the entire population. "A formidable array and one probably much below the real amount."

The same estimate of the proportion of private to public cases of five to one, arrived at by Dr. Sturgis from wholly different data, would give for New York, out of a much smaller population, 61,705 venereal patients in that year, 1873—nearly one in every fifteen of its men, women and children—a number only dwarfed by comparison with London where 100,000 poor alone are annually affected with syphilis.

Military and naval reports, while not free from the same objections of defective registration and classification, are, however, very much more exact, especially in the matter of enthetic diseases, there being less reluctance to apply for treatment and less dread of exposure on the part of the patient in a community composed wholly of men and no alternative but to consult the medical officer, who is required to include them in his returns. Your committee is indebted to the surgeon general of the navy, army and marine hospital service for the following official returns of the amount of venereal disease treated by medical officers in the naval and military services and mercantile marine of the United States during the last five years:

VENEREAL DISEASES IN THE UNITED STATES NAVY.

Year.	Total Force.	Total Sick from All Causes.	No. Cases Venereal Diseases	No. Cases Syphilis.	Per M of Force.		Per M of Sick.		Per Cent. Syphilis to Venereal.
					Venereal.	Syphilis.	Venereal.	Syphilis.	
1875...	10,141	7,882	737	500	78	49	94	64	67.84
1876...	11,138	7,797	699	424	63	38	92	54	60.65
1877...	7,641	6,748	527	342	69	45	78	51	63.75
1878...	7 764	6,878	548	341	71	44	80	50	62.22
1879...	8,869	10,494	853	490	96	55	81	47	57.44
1880...	....	....	....	....	....	....	....	....	....
Mean	9 110	7,949	672	418	74	45	87	53	62.20

VENEREAL DISEASES IN THE UNITED STATES ARMY.

Year.	Total Force.		Total Sick from All Causes.	No. Cases Venereal Diseases.	No. Cases Syphilis.	Per 1,000 of Force.		Per 1,000 of Sick.		Per Cent. of Syphilis to Venereal.
						Venereal.	Syphilis.	Venereal.	Syphilis.	
1875–76	White	21,718	32,523	2,262	1,147	104	53	69	35	50.70
	Col'd	2,014	2.971	364	198	181	98	126	67	54.40
	Total	23,732	35,494	2,626	1,345	110	57	74	38	51.22
1876–77	White	23,383	34,683	2,463	1,283	105	55	71	37	52.09
	Col'd	2,083	3,779	351	170	169	82	93	45	48.43
	Total	25,466	38,462	2,814	1,453	110	57	73	38	51.64
1877–78	White	20,872	26,398	1,840	954	88	46	69	36	51.84
	Col'd	1,895	3,048	351	146	169	77	105	48	45.48
	Total	22,707	29.446	2,161	1,100	95	48	73	37	50.90
1878–79	White	21,847	32,814	1,902	885	87	41	58	27	46.53
	Col'd	1,964	3,455	281	155	143	79	81	45	55.15
	Total	23,811	36,269	2,183	1,040	92	44	60	29	47.64
1879–80	White	22,087	33.645	1,957	960	89	43	58	29	49.05
	Col'd	2,387	3,669	309	152	129	64	84	41	49.09
	Total	24,474	37,314	2,266	1,112	92	45	60	29	49.08
Av'rge	White	21,969	32,013	2,085	1,046	95	48	65	33	50.17
	Col'd	2,069	3,384	325	164	157	79	96	48	50.
	Total	24,038	35.397	2.410	1,210	103	50	68	34	50.

VENEREAL DISEASES IN MERCANTILE MARINE.—As shown by United States Marine Hospital Service Report.

Year.	Total Sick.	No. Cases of Venereal Diseases.	No. of Cases of Syphilis.	Per 1,000 of Sick.		Per Cent. of Syphilis to Venereal.
				Venereal.	Syphilis.	
1875–76..........	10,975	2,698	2,110	246	192	78.20
1876–77..........	10,914	2,061	1,627	189	149	78.94
1877–78..........	11,334	2,162	1,825	190	161	84.41
1878–79..........	11,449	2,362	1,818	206	159	76.98
1879–80..........	24.860	6,384	4,492	257	180	70.36
Average.......	18,906	3,133	2,374	225	171	75.71

The last year of the Marine Hospital reports includes patients treated at the dispensaries and surgeons' offices outside of hospitals. Neither these nor the naval and military returns include the large number of cases not registered and treated surreptitiously by apothecaries, nurse and hospital stewards. Officers generally avoid the necessary exposure, and their cases, consequently, seldom appear on the returns. Enough has been shown to establish this fact, that at least one man in every thirteen in the naval service of the United States, last year one in ten; one in every nine in the army; of the negro troops one in six; one in every seven of the British army, and one in every four of the merchant sailors presenting themselves for treatment at marine hospitals and dispensaries, is affected with some form of venereal disease.

Your committee are able, by the courtesy of the surgeon general of the navy, Dr. Wales, to supplement these alarming figures by the significant fact that of the boys who were applicants for enlistment as apprentices in the United States navy during the year 1879, twenty per thousand—one in every fifty—lads under seventeen years of age—were rejected on account of venereal diseases, twelve of these being syphilitics. Furthermore, of the young men examined at a certain institution which they had left two years before in good health, not one in five escaped venereal disease of some sort. There is no reason to believe that the proportion among other young men is less appalling. The family physician and the specialist for private diseases, advertised without disguise in the family newspaper, will never tell the tale of the tens of thousands who seek relief at their hands.

But, even were it possible to obtain accurate information of the number of cases of venereal disease contracted in cities, it would give no indication of the actual injury to the human race by these diseases. It would take no account of the myriads of the happily still-born, and the feeble offspring who bring their taint into the world with them, after having diseased their mothers during their intra-uterine existence; nor of those other myriads, contaminated by mere contact with the infected who mingle in every crowd. Every one instinctively shrinks from the touch of the sufferer with small-pox; but how few realize that the syphilitic is a leper also to be shunned? how few mothers are aware of the danger to themselves and their children from nurses and housemaids drawn from a population in which every fifteenth person is diseased? how few parents suspect the peril to their daughters from her accepted lover's kiss, who may be that one in every five young men among the better classes who has a venereal disease, which there is one chance in two is syphilis?

These are not speculations. Gross has seen many cases communicated by kissing, and he tells of fifteen women, nine children and ten men diseased by a midwife, who had a chancre on her finger, contracted in the exercise of her profession, and who had thus carried the disease from house to house.

Marion Sims says: "I have seen a cook and chambermaid with syphilitic ulcers on the fingers, and nurses infected by the children who had been born of syphilitic parents, in turn infecting sucking babes born of healthy parents, and I have known a drunken vagabond husband to contract syphilis in a low brothel and communicate it to his wife, who unwittingly gave it to her four children simply by using the same towel and washbowl;" and one of your committee can add the case of an estimable and venerable lady who lost her eyesight this very year from using a towel in her son's room, carelessly left by him upon the rack, and another of the wife of a clergyman, who this summer, sought relief at a Virginia spring for a horrible affection contracted in domestic contact with her servant.

The present surgeon general of the navy, Dr. Wales, saw a number of cases of chancre of the lips among the smokers of one set of cheroots, of which the wrappers had been moistened by the saliva of a Manila cigar-girl, and at Beyrout he learned that it was not unusual for syphilis to be contracted by using an arghilch that had been pressed by the lips of a diseased smoker. Who would venture to eat the fig from Smyrna if he had seen the top layer of the choicest box pressed flat by the saliva-wetted thumb of a packer, who there was one chance in ten was syphilitic?

A member of your committee astounded an otherwise well-informed gentleman by explaining the risk he ran after he had been capsized in a river, in accepting the proffer of a flannel undershirt from a young man whose body was accidentally discovered to be spotted with a suspicious eruption.

A lady was equally alarmed when told by her husband, a physician, that she had invited to her table a young man, who, in the course of a physical examination that morning, had been found to have his mouth and tongue covered with mucous patches, and that her daughter was dancing in a public ballroom with another whose body was repulsive from syphilitic eczema.

A tired invalid at a fashionable hotel had just settled himself in bed, when the odor of tobacco on the pillow prompted an inspection, which revealed sheets which had not been changed, and which, being a medical man, he quickly deserted, conscious that they might have shrouded a syphilitic predecessor.

An editorial in the *College and Clinical Record* of Philadelphia, of October 15, states: "It happened to the writer to be recently called to see a man of most respectable surroundings, who bore an unmistakable venereal sore upon his hip, and subsequently manifested all the features of secondary syphilis. It was said that this had followed a trifling surgical operation of the part affected for the removal of a slight deformity; the instrument or the hands of the surgeon communicating the specific virus in the same manner, it will be remembered, that a New York dentist not long ago communicated syphilis by his forceps, and a well-known laryngologist innoculated a number of patients with pharyngeal chancre."

When the public knows by how many thousand channels this disease may assail them, your committee have no doubt that they will demand protection at any cost, and they urge upon this association the promulgation of the fact that so long as syphilitics are allowed to go unrestrained the spotless woman and the innocent child share the danger of contamination with the libertine and prostitute.

Let it be known that this fearful pest may be communicated—

By the blankets of the sleeping-car, the sheets, towels and napkins of the steamship, hotel or restaurant;

By the hired bathing dresses of the seaside resort and the costumes rented for the fancy ball;

By the chipped edges of a coffee-cup, as seen at most hotels and eating-houses, and their half-cleansed knives, forks and spoons;

By the public drinking vessel in the railway car or station, as well as the public urinal or closet;

By the barber's utensils, the brush and comb in the guest-chamber, the hatter's measure or the borrowed or sample hat;

By the surgeon's or dentist's instruments, or the vaccinator's lancet;

By the broom or dust-brush handled by a parlor maid, or by the spoon touched by the mouth of the cook or nurse;

By the toys sold to children in the streets by vendors with poisoned lips or fingers;

By playing-cards and visiting-cards, which have been used, and especially by car-tickets and by the paper money which circulates in a city where 50,000 syphilitics are at large;

By the loaned pipe, or cane or glove;

By the grasp of a friend's hand or the kiss of an accepted lover; by the son to his mother and sister; the husband to his wife and unborn child, and by the latter to its mother.

Were venereal disease restricted to those who seek illicit sexual gratification it might be well to let the guilty suffer and die; but when their sin is sure to leave upon them an ineradicable taint and to be transmitted to their helpless offspring; when, worse than all, the syphilitic leaves his stain upon whatever he touches to foul the chance passer—man, woman or child—as fearfully as if they had visited the vilest lupanar, it becomes the duty—the most important of all its duties—of this association to devise some plan for their protection.

Your committee have been charged with the suggestion of such a practical plan. Of the numerous propositions submitted to them, that most zealously advocated provides for the registration and compulsory examination of prostitutes, and the seclusion of those diseased; but this alone your committee does not hesitate to admit to be inadequate.

It has, undeniably, accomplished a wonderful amount of good in continental cities, in the military towns of England, in insular garrisons like Malta, and recently and remarkably in Japan. On this point the universal testimony of naval and military officers cannot be impeached. Fournier, one of the ablest of living sypilographers, declared to Medical Director Cines that syphilis had been virtually stamped out of Paris, when the advent of the German army reintroduced it; but he expressed his confidence that it would again be stamped out as before.

Colonel Fletcher, of the surgeon general's office of the United States army, writes to your committee:

"In 1863, while I was on duty in Nashville, the question of periodical examinations of the prostitutes as a protection to the troops stationed at or passing through the city was referred to another medical officer and myself. We drew up regulations for the purpose, and for nearly three years the women were examined—at first every two weeks, but subsequently every ten days.

I believe this was the first occasion of any systematic inspection of prostitutes attempted in the United States. Its results may be briefly stated thus:

(1) The amount of venereal disease was markedly lessened, so much so that its occurrence came to be looked upon (absurdly, of course) as an imputation on the care of the examining surgeon. I have more than once known a company officer complain that a man was off duty for disease caught of such a girl, at such a time, and demand that she be sent to the hospital.

(2) The women who were at first rebellious, became quite reconciled to the system. I have known them come to the hospital voluntarily, desiring to be examined for suspected disease.

(3) It was self-supporting, the fees paying the expenses of the hospital.

To-day the Nashville prostitute advertises herself in big gilt letters over her front door, before a blazing light, more conspicuously by far than were she enrolled in a police register, while purblind virtue and false morality stalk by and leave no other guarantee to society than the poor creature's own good sense that her house shall not become a focus of disease as disastrous as smallpox or diphtheria.

In ten years, the surgeon general of the navy is authority for stating, the amount of venereal disease on the Asiatic station has fallen from 425.8 to 112.1 per thousand, a difference of 313.7 per thousand, due to the examination of prostitutes practiced at Hong Kong and in Japan, and the seclusion of infected women in lock hospitals. The scandalous scenes which disgrace the chief thoroughfares of Liverpool and London and New York are no longer possible in cities like Paris and Lisbon and Hamburg, where public women are under police surveillance; nor is it true that clandestine prostitution attains such enormous proportions in places where the Gaukeiro or Yoshiwara confines the whore as in Japan, or where the temples of Venus Meretrix, as in Marseilles, have their own secluded quarter, to be shunned by the virtuous, that it does in Philadelphia and Boston and Brooklyn, where the respectable woman is jostled in every street by unsuspected courtesans, and unfledged boys are lured to disease by young girls in the garb of decent poverty.

"Doubtless," says Diday, "a sensible progress has marked the beginning of this century. With the establishment of a better regulated surveillance, we have seen the coincidence of the diminution of the number of venereal affections, but the persistence of the scourge is an evidence of the insufficiency of these measures." "How is it, then," asks Fournier, "that syphilis is especially derived from inspected women? It is, on the one hand, because the relations with this class of women are more numerous; and, on the other, because the surveillance, which is exercised over them, is completely insufficient."

If the contagious diseases act of England has not accomplished all the good contemplated, it is because the act has not been stringent enough. If syphilis re-entered Paris after having been once stamped out, it was because every avenue for its approach was not carefully guarded.

[TO BE CONTINUED.]

BOOK REVIEWS.

WOOD'S LIBRARY: MINOR SURGICAL GYNÆCOLOGY, A MANUAL OF UTERINE DIAGNOSIS AND THE LESSER TECHNICALITIES OF GYNÆCOLOGICAL PRACTICE FOR THE USE OF THE ADVANCED STUDENT AND GENERAL PRACTITIONER. By Paul F. Mundé, M. D., Professor of Gynæcology in Dartmouth Medical College; Obstetric Surgeon to the Maternity Hospital, New York, etc., etc., with three hundred illustrations. New York: Wm. Wood & Co., 1880.

This book will prove especially valuable to the young man just starting out in practice. Too often the young physician drives from him his female patients on account of his awkwardness and ignorance in making the most trivial examinations of the sexual organs. We have many thorough and valuable works upon the diseases of women; but none of these describe minutely the methods of making examinations. To supply this defect the work before us has been written. It gives the positions, instruments and methods of examination for all the minor surgical gynæcological operations. Instruments, positions and methods are well described by means of exact language aided by well executed wood cuts. To the younger practitioner this work will be well nigh indispensible.

SCRIBNER for February. Subscription price, $4.00 a year in advance. Single numbers, 35 cents. Scribner & Co., 743, Broadway, New York.

The Midwinter (February) *Scribner* has always been a special number, as rich as the choicest literary matter and the most beautiful wood engravings can make it. Of last year's midwinter number the *London Times* said: "It is a really magnificent triumph of American pictorial art and literary genius." The English publisher of *Scribner* has telegraphed for seventeen thousand copies of the present number,—an advance of six thousand upon his orders last year, and the largest edition of an American magazine ever sent to England;—in fact, it is said to be larger than the monthly sales of *any English magazine.* The American edition of *Scribner* has grown during 1880 about twenty thousand copies.

In the same ratio that *Scribner's Monthly* is prospering, *Saint Nicholas*, the famous magazine for girls and boys, issued by the same publishers, grows apace. About one hundred thousand copies of the Christmas (December) number were sold, while the January number has been for some time out of print. In February, there is a full account of the Obelisk, richly illustrated from sketches and photographs, showing the great monolith in all stages of moving.

HERNIA, STRANGULATED AND REDUCABLE, WITH CURE BY SUBCUTANEOUS INJECTIONS, TOGETHER WITH SUGGESTED AND IMPROVED METHODS FOR KELOTOMY. ALSO AN APPENDIX GIVING A SHORT ACCOUNT OF VARIOUS NEW SURGICAL INSTRUMENTS. By Joseph H. Warren M. D., Member of American Medical Association, and delegate to foreign countries for 1880 and 1881, etc., etc. With illustrations; cloth; pages, 274; price, $3.00. Boston: Chas. N. Thomas, 215 Fremont street, 1881.

Some thirty years ago Dr. Geo. Heaton claimed to have discovered a method for the radical cure of Hernia. Dr. Heaton visited Boston and offered to perform the operation in the presence of the professional men of that city. He was not considered worthy of attention and was treated with much coolness. He then began to practice his operation as a secret, and finally boasted so much of his success that he was rightly denominated a quack. At his death the cure of hernia by subcutaneous injection which had been practiced by Heaton; but which after all had been discovered by Dr. Pancoast, of Jefferson Medical College, and which had only been modified by Heaton, was published by Dr. Davenport. Dr. Warren the author of the volume now before us was instructed in this method by Dr. Heaton, and ever since has made the subject of hernia a special study. He has improved the injection method, especially by the invention of suitable syringes. He has presented his improved method to the British Medical Association and to the Academy of Medicine at Paris, where it has been received with favor. The volume contains a description of the various methods of operating for hernia and the instruments used. The subjects are discussed thoroughly, and the methods of operation described with sufficient detail.

AMERICAN JOURNAL OF INSANITY.

We wish to call the attention of the profession to the *American Journal of Insanity*. It is the fault with journalism in general, and unfortunately medical journalism is no exception to the rule, that too often the attempt is made to increase the subscription list by pandering to the popular desire to hear of the novel and wonderful things which happen—and which often do not happen—at the expense of keeping pace with the highest intellectual thought. This the journal mentioned above is entirely free from. Its articles are written by men of large experience and of the highest scientific attainments; and, indeed, we have but to look at its editorial corps, at the head of which is Dr. John P. Gray, of the Utica lunatic asylum, to be satisfied of its high scientific character.

Although as the name indicates, it is a specialist's journal, it nevertheless commends itself almost equally to the general reader, for what practitioner of any extended experience can afford to be ignorant of the advances which are being made in the diagnosis, method of treatment; advice to be given, etc., in cases of insanity. As illustrating the latter point, the last number of the journal contained a long article on the "Marriage and Hereditariness of Epileptics," in which the advice to "get married," often given to epileptics, is shown to be the very worst that could be given, both because it is the worst thing that could happen to the patient himself, and also because of the almost certainty of entailing the terrible disease upon his offspring; and how often is the general practitioner called to give advice in just such cases as this. The journal prints the proceedings of the "Association of Medical Superintendents of American Institutions for the Insane," in which will be found subjects of very considerable interest to the general practitioner. We cannot too highly recommend this journal to the notice of the profession. The journal is now publishing a series of articles upon "Structural Changes, and the Nervous Centers in Disease," by Theodore Deecke, the Pathologist, of the Utica Asylum.

THE

PHYSICIAN AND SURGEON

A MONTHLY MAGAZINE,

DEVOTED TO MEDICAL AND SURGICAL SCIENCE.

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ORIGINAL ARTICLES.

THE PIONEER DOCTOR.*

BY EDWARD COX, M. D., BATTLE CREEK, MICHIGAN.

MR. PRESIDENT: It is our purpose at this time to glance at the healing art as it was practiced in Michigan at an early period, and to speak of the pioneer doctors, the obstacles they were called upon to surmount, their hardships, failures, and successes, and to some extent the influence they have had upon the profession, our institutions, and civilization; and if perchance I use the pronoun I more often than is necessary, I hope you will pardon me, for the egotism of the old is frequently greater than the self-conceit of the younger members of the profession.

At a very early day Detroit was settled by the French and a few military posts were established on the frontier. These constituted the entire settlements of white people until a little more than fifty years ago. Previous to that time the interior of Michigan was inhabited exclusively by savages; no white man save the hunter, trapper, and surveyor, had ever placed his foot upon its soil.

The red men, like the white men, were subject to accidents and disease, and consequently required the aid of the healing art. "The medicine man" became a necessity to them, as much so as the medical profession to their more enlightened brethren.

Being exceedingly superstitious, and having no knowledge of the sciences, and but little of the arts, they looked to their priest for the assistance required.

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*A paper read before the Ann Arbor Medical and Surgical Society, January 24, 1881.

He was a perfect charlatan, shrewd and calculating, making his people believe that by prayers, amulets, incantations, charms, witchcraft, and other pagan devices, he could call up and communicate with the spirits of the dead, and that the "Great Spirit" would reveal to him the best means for healing the sick.

A friend related to me a circumstance which took place in the year 1840, where the city of Hastings now stands, illustrating the character of the medicine man and showing that the pale-faced charlatan may take lessons in deception from his pagan brother. Some children had been sick a long time and the friends had become dissatisfied with the prophet. He informed the people that the patients were possessed of "*jimnito*" (the devil) and that he must have the assistance of the tribe to drive him out.

Accordingly, several hundred assembled. The patients were placed on partly frozen ground near a good fire, in a close apartment made of bark resembling a tent or wigwam which was soon filled with steam or vapor.

Prayers were now said invoking the "Great Spirit" to cast out "*jimnito.*" Incantations and various devices were performed, the whole party engaged in singing and dancing until a small serpent crawled forth from the apartment and was caught by the prophet, who exultingly exhibited it to the people as a proof of his skill and true prophecy.

He then bit off the snake's head and cast it into the fire amid the savage cheers, yells, and congratulations of his deluded followers. He had cast out jimnito! The Indians, however, had learned from experiment and observation the effects of certain remedies and applied them empirically, but sometimes successfully.

In the year 1839, I witnessed the treatment by an Indian medicine man of a white person suffering from intermittent fever. He administered an infusion of "culver root," for a cathartic, "pluerisy root" as a diaphoretic, and the bark of "dog wood" as a tonic and anti-periodic.

The treatment was successful. Not long afterwards my business took me past an Indian camp where a young person was suffering from pneumonia. Learning that I was a pale-faced medicine man I was invited by an Indian to see the patient. The consultation was informal. They had used the vapor bath, given him infusion of fever bush, roughly scarified his chest, given him mucilage of basswood bark, and blistered him with what appeared to be bark of the white ash tree. This patient also recovered.

Not long before 1830, immigration from the eastern and other states commenced. The pale faces now commenced taking possession of the red men's hunting ground and were sparsely scattered through the territory. Rude cabins were erected by unskilled mechanics, trees were girdled, the ground broken by the plow and the cultivation of the virgin soil commenced.

From necessity every man was obliged to practice vocations to which he was not accustomed; such as carpenter, blacksmith, shoemaker, etc., erecting his own buildings, mending chains and plows, and repairing boots and shoes for his family, and when sickness came he was obliged to be his own physician.

Soon, however, some white men, as ignorant and unprincipled as the Indian prophet of whom we have spoken, began to claim an intuitive knowledge of the art, and assuming the title of physician entered upon the practice of medicine. They had learned the use of blue mass, Dover's powder and quinine, and were frequently successful in treating malarial fevers, and temporarily acquired some reputation as medical men. Like "the ass in the lion's skin," however, their real character was soon discovered.

One of these pretenders was S. R. B., a mechanic, living in B. C., and being too indolent to work he assumed the title of "Doctor B.," and for a while had a large practice.

An incident showing the character of these charlatans may not be out of place.

In 1837, Mr. G. married a young woman, purchased a piece of land in Barry county, built a log house and moved into it. Indians at that time were numerous, and for several months previous to the birth of her first child, Mrs. G. was greatly annoyed and alarmed by their frequent visits to her house.

Fearing evil effects upon her prospective heir, she consulted her medical adviser, this Dr. B., who informed her that her fears were well founded, which opinion distressed her still more. A large child and protracted labor produced a dark purple appearance of the babe, which the doctor informed the family was an "Indian mark," and that if it grew to maturity it would then have the complexion and characteristics of an Indian, and advised that it should not be washed, dressed nor nursed, but laid aside to die.

In pursuance of this advice it was placed upon a loose board in the unfinished chamber, where it remained until the next day, when a neighbor, Mrs. C., mother of the Hon. V. P. C., formerly a regent of the University, called, and hearing the cries of the suffering babe and learning the cause of the cruel neglect, "*freed her mind to the ignorant charlatan*" upon the enormity of the crime and the stupidity and ignorance he had exhibited, removed the child from its dangerous position and gave it the attention necessary to save its life. It grew up a beautiful girl and is now the accomplished wife of a respectable gentleman in Detroit.

Another case was that of Mr. R. W., fourteen miles south of Battle Creek. E. H., afterwards convicted of counterfeiting and passing counterfeit money, claimed to be a cousin of President Harrison and a "*natural doctor*," and was employed to attend Mrs.

W. in her confinement. He remained with the patient two days to no purpose and then informed her the reason she was not relieved was that she was about to have twins, one of which was ready, the other not ready to be born. My friend and kinsman, Dr. Campbell, was called. He found a distended bladder which the "*natural doctor*" had mistaken for the "twin not ready to be born." This was immediately relieved with a catheter. The other "twin" was born after a short delay. These were fair specimens of those who at that time practiced the healing art.

Immigration was so large during the next few years that the census of 1840 showed a population of more than two hundred thousand. Enticed by the "beautiful peninsula," the people came in swarms and located in the wilderness, determined to make homes and fortunes out of the wilds of Michigan. They were young, intelligent, and energetic, the very people to accomplish whatever they should undertake.

The change of climate and habits of living, the breaking up the new ground, the use of impure water, and the various hardships which the pioneers endured, produced sickness and consequently a demand for good medical talent. At this time not only the medical colleges of the great cities, but the country medical schools, Bowdoin and Dartmouth, the institutions at Castleton, Pittsfield, Fairfield and Geneva, were educating and annually graduating large classes of students. These young men were financially poor, many of them had struggled with poverty, and by their own exertions had accumulated the means to obtain their education.

Their elementary education was accurate, but limited to what was then called an academical education, *i. e.*, a good knowledge of the English branches, a smattering of the Latin language, a little of the natural sciences and higher branches of mathematics. Very few had received a collegiate education. Custom at that time, which in some States was enacted into a law, required students to study four years before they could be admitted to an examination for license to practice or for the degree of doctor of medicine.

In consequence of this wholesome regulation, these young men were not hurried through like hot-bed plants, but attended two or three courses of lectures at their respective colleges, and the balance of the four years in the offices of their preceptors. This regulation gave them time and opportunity to study the profession practically and scientifically, and qualified them to practice the same.

They appreciated the lessons they had been taught, and determined to emulate the examples of Mussey, De La Mater, Woodard, Tully, Childs, Willoughby, Parker and Coventry, eminent medical teachers, whose influence we hope will not be lost so long as our profession has an existence.

The east was now crowded with physicians and the new fledged M. D.'s were anxious for locations and for business. Allured by the glowing accounts of the beauty and fertility of the country, many of them collected the little means they possessed, some received a small sum from parents already embarrassed by reason ot means used for the education of the son, and still more borrowed from friends the funds necessary to take them to *Mich-i-gan*, which at that time, in the minds of many, was little short of an "Eldorado."

Some married and moved in emigrant wagons, others traveling on horseback, and still more by canal boat and deck passage on lake Erie steamers, wended their way to the place of their destination.

Among the very early pioneers were Drs. Pitcher, Houghton, Denton and Sager, all able men and leading members of the profession. Of those who became representative men there soon followed Drs. Lord and Cowles, of Ann Arbor; Patterson, Barnard and Spalding, of Lenawee; McLean, Gorham and Bingham, of Jackson county; Crane, Wheelock, Tuttle, Montgomery, Sibley, Hart, Hays, Hudson, Parks, Nims, Campbell, and he who now addresses you, of Calhoun; Hurd, Cutter and others, of Branch; Elliott and Mottrom, of St. Joseph; Abbott, Stetson, Starkey and Starkweather, of Kalamazoo; the Upjohns, of Richland, and Hastings, Paddack and Hoyt, of Oakland; Clark and Gage, of Eaton; Shepard, of Kent, and many others not personally known to us, never forgetting my able, honorable and learned friend and class-mate, Professor Palmer, of the University. There also came a few middle aged physicians who purchased land and engaged in other business, practicing but little, and finally abandoning the profession for more lucrative employments.

Being now ready to go to work he seeks a location, procures a horse, saddle and bridle, a pair of leather pill bags, a pocket case of instruments, a turnkey for extracting teeth, which, with five or six volumes of text-books used at college, constitute the outfit and worldly wealth of this "Pioneer Doctor."

He, however, possessed something of more value than worldly goods. He was ambitious, desirous of fame and fortune. He possessed the elements of success, integrity and sincerity, industry and energy, perseverance and persistence, good perception and judgment, and although he had a good amount of self-conceit, yet in the main his confidence was a truthful one, that he was equal to the demands upon him.

The doctor hears of thriving villages through advertisements of men interested in real estate, but on visiting those places finds nothing but "paper cities," in one of which he "locates" and holds himself ready for business. Finding but little to do many of the doctors engaged in the wild speculations of the time, and when the crash of 1837 came they found themselves bankrupt, and to free themselves from trouble took advantage of the bankrupt law. The bankrupt with other pioneer doctors resumes practice so poor that he cannot even pay for the sheepskin he uses in place of a saddle.

Soon, however, the soil was broken by the plow, which with other causes produced the great amount of sickness which prevailed in those days. Malarial fevers were now numerous and terrible. Scarcely a person escaped, there not being sufficient well people to care for the sick. Physicians rode their ponies both night and day by marked trees, Indian trails and over "corduroy" roads, sometimes followed by wolves, visiting the cabins of the indigent and afflicted settlers and administering to their wants, catching a little sleep on horseback or rolled up in the skin of a wild animal on the floor of the cabin, and passing through hardships which none but a pioneer can endure. Finding a large amount on his ledger due him from his patients he thinks he is on the road to wealth and prosperity.

If not married he now marries the daughter or sister of a pioneer or returns to his ancient home for the "girl he left behind him." He purchases a lot and commences building a house upon a scale equal to the whole amount due from patients.

The building progresses slowly for he cannot collect his debts in consequence of the want of resources in the country. He incurs debts to prepare his house barely sufficient to shelter his family, and the building is not finished for several years. There is very little money in the country; business is done mostly by exchange deal ("dicker"), and he cannot extricate himself from debt. He is still proud and ambitious, works faithfully in the profession, but can scarcely get sufficient money to pay the postage on his letters, which is twenty-five cents each.

He runs in debt for medicines and it is impossible for him to pay for a book or a medical journal, much less for instruments and appliances necessary for his business. A physician at that time said to me, "I have no library, no books, no journals; this is a poor time for literary pursuits. My main reading of late has been furnished by the sheriff, consisting of capiases, executions and mortgages." These embarassments continued until the resources of the country were developed sufficiently to establish a credit, which was about 1850 to 1854.

It will be supposed that these embarassments would so discourage the young physician that he would abandon the profession. Not so, however, for he loved his profession next to the religion of the God he worshiped.

He had enlisted for life, nailed his flag to the mast and would neither retreat nor surrender. Encouraged and cheered by his faithful wife, man's most safe adviser, he was always found at his post ready to respond to the calls of his indigent and suffering patients, avoiding neither the midnight darkness nor the noon-day sun; through storms and fair weather he made his way by marked trees and bridle paths to the cabins of the sick, and ministered to the afflicted with the zeal, energy and faithfulness which none but the true physician can manifest.

There were few or no specialists in those days, all were general practitioners, and it was not uncommon for the physician to have in charge at one time, requiring immediate attention, a score of cases scattered over as many miles of territory, consisting of fevers, diseases of the bowels, measles, scarlatina or small-pox, pneumonia, rheumatism, infantile convulsions, puerperal fever, injuries of the head, compression or concussion of the brain, an obstetric case, a gun shot wound, a dislocation or fracture, and wounds requiring the ligating of an artery or amputation of a limb. To promptly attend these cases required ubiquity, versatility of talent, and almost superhuman endurance. He had none but his text books to read. These he consulted with nearly as much veneration as his pious mother read the Holy Bible, and if you will look into the library of one of those old practitioners you will find "Eberle's Practice of Medicine," "Dewes' Midwifery," and "Cooper's First Lines of Surgery," showing marks of usage resembling those in the elementary spelling book he used in his school-boy days.

Necessity is the parent of invention, and necessity compelled the young practitioner to become self-reliant and an accurate thinker. With few books to consult, with no experienced or older member of the profession to advise, his perceptive faculties increased, his inventive genius improved and his judgment matured, and I sometimes have thought that in the *art* not *science* of medicine he improved faster than if he had the advantages of the present time.

Accidents requiring surgical aid were frequent, fractures in particular. "It takes a good workman to work without tools." Our young surgeon did not work without appliances, but made them himself. With his axe, hammer, saw and pocket-knife, out of a slab or piece of timber he manufactured his pullies, long and short splints, and his double inclined planes. With the felt of a dilapidated hat, an old band-box, a piece of sole leather or an old garment saturated with shellac, he prepared the necessary appliances for his fractures, and his success in making good limbs has never been excelled by those using the various splints hawked about and found in most surgeons, offices, not even excepting the porous splint manufactured by Ahl, of Philadelphia.

I once witnessed the amputation of the forearm with the instruments of a pocket case and a joiner's stiff-back saw. Grafting wax was used for adhesive plaster. The patient did well. At another time I ligated the popliteal artery which was wounded by a butcher-knife. By the light of a lamp made of a cotton rag tied around a metallic button, placed in an old saucer filled with racoon's oil, I separated the artery from the vein and nerve with the hilt of a scalpel taken from an old dissecting case and passing the ligatures with the common curved forceps, I ligated the artery and had the satisfaction of saving both the life and limb of my patient.

One of the most formidable of these operations performed under most unfavorable circumstances was related to me by a gentleman of the Saginaw Valley. He was called into the country, eight miles from Bay City. The night was dark and rainy, the roads rough and muddy. Over causeways and through marshes he made his way to the humble cabin of an indigent, simple-minded German. The wife was alarmingly sick. In a short time the terrible throes of labor produced a rupture of the uterus. The doctor informed the family that the only chance of saving either wife or child was by the Cæsarean operation, which was consented to.

He accordingly made the necessary incision and removed the child and secundines. The child was living. The parts were spounged with old rags and artificial serum used, made of salt and water. The sutures were made of silk taken from his pocket-case. He had no adhesive plaster. Finding an old flannel under-garment he cut it into strips and sewed them together, making a roller which he applied to the abdomen from the chest to the hips, as a German woman applies the band to a new born infant. He gave her an anodyne and some spirits of camphor, the only stimulus at hand. She rallied well and after six or eight hours he returned home fearing every hour to hear that she was dead.

The next day he visited her, found her doing well. He continued his visits for several days. A few weeks afterwards he saw a crowd in the street near his office listening to an harangue and abuse of himself by this same Teuton.

He had come to town with his stags and a dilapidated wagon in which was his wife and babe. On seeing the doctor he increased his abuse, complaining that he had informed him that the "frow and papee" would both die and that he must "pee" a great fool, for said he, pointing to his wife, I have got "so coot a frow and papee" as any other man, adding he would never pay "so pig a-fool vun red cent." This illustrates the difficulties under which pioneer surgeons performed the most formidable operations and the want of gratitude and appreciation exhibited by patients.

Adversity continued many long years. About the year 1850 you might see a little improvement in the financies of the people and of the profession. Means could be raised for some of the comforts of life. Periodicals made their appearance on the physician's tables and books were added to his library; his general appearance was that of more prosperity; the houses and offices of the doctors were improved, their manner of doing business changed, which showed the taste, refinement and true character that had been latent so many years by reason of adversity. From that to this time their history is well known and needs no comment.

As citizens, the pioneer doctors were called upon to perform various duties outside of the profession, and they were ready and willing to use their talents where they would be most beneficial. If a highway was to be laid out or a mill race excavated, for want of a professional surveyor or engineer, he was called upon to survey the one or engineer the other.

He was a good organizer and frequently led or assisted in organizing and conducting the various institutions which have made our civilization what it now is. If you search the old records you will find that he was one of the organizers of the first Sunday school, that he assisted at the organization of the first religious society established in his town; he was a member of the town board, a trustee of the village when organized—perhaps a member of the legislature, and scarce a city in the State can be found whose municipal government has not for a considerable time been presided over by one or more of the pioneer doctors.

In educational matters he took a high stand, and from the very earliest days of our civilization you will find these men connected with our primary schools, members of school boards and boards of education and trustees of colleges, and our beloved University is greatly indebted to them for the high position it now occupies.

As Regents, Drs. Pitcher, Patterson, Upjohn, and perhaps others unknown to the writer deserve great credit, and in organizing our system of education the representative men of our profession rank equally high with those great and good men, Felch, Pierce and Crary. Their good impulses and accurate ideas have been transmitted to others younger than themselves and with their assistance many of our State institutions have been founded.

Our asylums for the insane, deaf, dumb and blind, our hospitals for the sick, our State school for indigent children, our various charitable and penal institutions have all received active assistance from the pioneer doctors and those who follow their spirit and teachings. In acquiring fame and wealth most of the pioneers failed, but few ever reached fame or reputation beyond their immediate locations, notwithstanding which they were none the less useful to their fellow man, sensible, skilful and successful practitioners; and as the Greeks said of their chief surgeon who was wounded in one of the battles of the Trojan war, so can it be said of them,

> "A wise physician skilled our wounds to heal,
> Is more than armies to the public weal."

Of those who became most prominent, we may mention Dr.

Douglas Houghton, who came to Detroit at an early day, distinguished himself as a learned physician, rendered valuable services to the University, made a geological survey of the State and was for a time mayor of Detroit, and to no man are we so much indebted as to him for the development of the salt mining and many other interests of Michigan. When pursuing his investigations he was drowned in the northern waters of the State, and though young left a record more enduring than tablets of brass or monuments of stone.

Dr. Zina Pitcher rendered eminent service as an army surgeon, physician in private practice, as chief executive officer of his adopted city and as an officer of the University. He also contributed valuable articles to medical literature. He was an urbane, courtly man, the pride of the social circle, and in kindness, learning and ability, he possessed the attributes of the true physician and well deserved the title of "Good Samaritan." He never accumulated wealth, yet his career was very successful, and his example as a physician, patriot and christian gentleman is worthy of imitation.

As an organizer and executive man, Dr. Denton was a success. He rendered good service not only as a physician but as a member of the State senate and professor in the University. If you would look for high personal and professional character, learning and general scholarship, you have but to refer to the character and attainments of the late Dr. Sager.

As a pathologist and practitioner you will agree with me that my excellent friend, Dr. Palmer, and as teachers he and his equally worthy and learned colleague, Dr. Ford, have been successful and have well earned reputations that are as extensive as civilization. Of my personal acquaintances, Andrews, Elliott, Shepard, Cutter, Alger, Spalding, Bingham, Montgomery, the Upjohns and many others, still live. With reputations less extensive they are no less worthy and talented than those of whom we have spoken.

They are fair representatives of the physicians of early times who, as we have already said, had done much not only for their patients but as citizens in organizing society, developing the resources of the country and promoting the best interests of the people. If they enjoy neither wealth nor fame, they possess the confidence of their neighbors and the profession. They have generally acquired a competence for the maintainance of their families and the education of their children; they have well served the people and have benefitted their fellow man. No happier man can be found than the "pioneer doctor." He is a success, and can say with the poet Granger:

"What is fame, an empty bubble,
Gold a constant shining trouble."

* * * * * * * *

"And be this maxim graven in thy mind,
The height of virtue is to serve mankind."

Their influence and example have been good; they observed the amenities and ethics of the profession, practicing it as a science and rational art; they have not wandered and sought after "strange Gods and false doctrines."

Many have gone to "that undiscovered country from whose bourne no traveler returns." They have fought the good fight, they have finished their course, they have kept the faith, and we humbly trust that their good example will be imitated and their influence felt by the profession from generation to generation.

The advantages and facilities for obtaining a good medical education are now much better than those enjoyed by the pioneers. The colleges have gone in the right direction, both in preliminary requirements and lengthening the course of study, repudiating the *hot bed* process heretofore too much in vogue, and which has been the cause of graduating too many *medical dwarfs.* The improvements in the various branches of the profession have been great. The young physician now entering upon his professional duties should be better qualified than the novitiate of half a century ago. Many will locate in new countries, but they will not have all the embarassments which followed the Michigan pioneers. They had no railroads and very little means of communication with the older countries. These were constructed after the country was settled and civilization was established.

Now the great missionary and civilizer, the railway and locomotive, precedes the settlement of the new countries, facilitating business and preventing many of the embarassments of former days. Yet the young practitioners will find many "a thorn with the rose," and that success can only be obtained by patient, energetic labor; embarassments and disappointments can only be overcome by well directed efforts, patience and perseverance. What the future of our profession in Michigan will be remains to be seen. It is not to be discussed at the present time; I, however, may be allowed to say that the organizers of society in a new country generally make an impression for good or evil which lasts through many generations.

The influence of our physicians is not confined to our own State. The University and medical colleges have their representatives in many States and territories, carrying with them the ideas, principles and education obtained from the profession in Michigan.

Believing that the energy, industry and application to business, the willingness to endure hardships for the benefit of their patients, the readiness to assist in organizing and conducting the various institutions which promote the best interests of society practiced by the pioneers, are subjects worthy of the consideration of young physicians, you will permit me to express a hope that avoiding the faults, they will emulate the virtues of the pioneer doctors of Michigan, and that after a long and well spent life it can be said of them, they have done their duty to their patients by skillful and kind attention, and to society by endeavoring to promote the moral, social and material interests of the people.

THERAPEUTIC USES OF COLD WATER.

BY PROFESSOR GUSTAV HUGUENIN, ZURICH, SWITZERLAND.

I. TYPHUS.

The treatment of typhus without complications has become very simple since the introduction of the cold water therapeutics. Two principal remedies are used:

(*a*) The cool bath.
(*b*) Natr. salicyl.,
Natr. salicyl. with chin. mur.

The cool bath is used in *all cases*, light and severe. In light cases, where a rapid and thorough antipyretic is not so necessary, a bath of short duration is given.

Each patient is measured *every hour* in the beginning of the treatment in order to ascertain the run of the fever, which is very necessary to know in order to judge of the way the *natr. salicyl.* shall be given. The principal rules are as follows:

(1) *Light cases.*—The bath is given as soon as the temperature reaches 39.4°. The temperature of the bath, 12–15° Centigrade, where the patient is robust, while where the patient is delicate and anxious a temperature of 20–25° Centigrade is given in the beginning, and cold water is gradually added until the temperature reaches from 16 to 12° Centigrade. Length of bath, 5–12 minutes. It is often found necessary in severe cases to give the bath at a temperature of 39°, yes, even at 38.5°.

With the baths, natr. salicyl. is given and for this purpose it is necessary to know the run of the fever because the natr. salicyl. must be given before the temperature reaches its height. In the second week of the disease the patient takes generally three grams natr. salicyl. in the morning and the same dose in the afternoon. For example: at 4 o'clock in the afternoon. If the temperature increases gradually from 4 o'clock, so that at 5, 39° is reached, the bath is given and the temperature sinks in this manner to 37–8°, 38°.

(2) *Severe cases.*—In severe cases, particularly where delirium and sopor exist, the bath is given at a temperature of 39°, in very severe cases 38.5°, the temperature of the bath 12–15° Centigrade, and as often as the temperature of the patient reaches the above the bath must be repeated. It often happens that ten or twelve baths are required daily. In cases of coma cold water is poured over the head from a height of *ten* centimeters or thereabouts. To this treatment is added natr. salicyl.

from 8–10 grams per day, (4–5 in the forenoon and 4–5 in the afternoon). A mixture of natr. salicyl. with chin. mur. is often preferred (0.5 gram natr. salicyl.+0.5–1.0 gram chin. mur.) In this way the fever is very powerfully influenced in severe cases.

(3) *Debility of the heart* is not according to our opinion a contraindication, either for the baths or the natr. salicyl. Such patients receive in addition up to a liter (quart?) of wine, besides 80–100 grams of rum or cognac with tea. Before and after each bath a certain quantity of wine is given, and during the bath the pulse and color of the skin are narrowly watched over. We have never had up to the present time one unpleasant occurence from this manner of treatment.

(4) *Complications.—Delirium* of all kinds is no contraindication, on the contrary we consider the antipyretic treatment particularly called for.

Larynx complications seem to be a contraindication.

Laryngo-stenosis particularly forbids the application of cold water.

Lung complications, contrary to the opinion formerly entertained, are considered by us *no* contraindication.

Bronchitis, atelectasis, hypostasis are *benefitted* by cold water.

Hæmorrhage of the *bowels* is an immediate contraindication.

Pain in the *bowels*, which indicates an *affection* of the *peritonæum* is an immediate contraindication.

Thrombosis of the *cruralis* is a contraindication.

Nephritis typhosa is not a contraindication.

II. PNEUMONIA, CROUP.

Every severe case is to be treated in the same manner as typhus in all the details. In pneumonia particularly the treatment must be applied with energy and persistence. In other words the cold water treatment must at once be considered the *all important* and not come in as an auxiliary.

Debility of the heart is treated the same as given above.

III. DIPHTHERIA, SCARLATINA, MORBILLI, VARIOLA, PYÆMIA, SEPTICÆMIA,

are *all* to be treated exactly according to the method used in typhoid fever given above.

In the cases of acute exanthem it is wholly indifferent at what stage it has arrived, the *height* of the *fever* being the principal thing.

In these diseases, as well as the others mentioned above, we must consider the cold water treatment as the greatest acquisition of the day.

IV. HECTIC FEVER IN CASES OF TUBERCULOSIS, VERKÆSENDE (CHEESY DEGENERATION), PNEUMONIA, ETC.

In these cases we have had no satisfactory results either from the cold water treatment or from other methods, the fever being very much less influenced by the cold baths than in the above named diseases. The usual antipyretics often have no influence and we must confess that we do not know how to treat the fever in tuberculosis successfully.

V. HYPERPYREXIA, (42–43.5°).

In *typhus*, in *all* the *acute infectious diseases*, *pneumonia*, *pluritis purulenta acuta*, as well as *acute polyarthritic rheumatism*, we use very cold baths, 7–9° Centigrade—the water is made colder with ice. Sudden hyperpyrexia is *very* dangerous and can only be treated successfully by this method. The patient is given a good quantity of wine as well and hypodermic injections of ether or musk tincture, clysmata with musk tincture. During the bath the pulse and color of the skin are watched closely.

We have had the pleasure of saving a great number of patients from sure death by this method of treatment. It demands experience and caution, but it has before it a grand future.

"TRANSPOSITIO VISCERUM LATERALIS"—DR. A. FÖRSTER.

BY C. A. BABCOCK, M. D., DETROIT, MICHIGAN.

Thomas S. Beaudoin, the subject of this sketch, was born near Malden, Ontario, January 4, 1864. His parent were both healthy and are still living. He has four brothers and two sisters yet alive, and two sisters who died when young. He is the youngest of the family. Has always enjoyed average good health. Had an attack of typhoid fever when fourteen years old, and was treated by a skillful doctor, who thought it necessary to blister the right inguinal region. The patient says he don't think there was any pain, in that particular spot, more than in other places. But the doctor ordered the blister, and the brother, who acted as nurse says: "I gave it to him good." At any rate, the patient recovered. Some genius, presumably an M. D., happening to hear the heart pounding away in the neighborhood of the right nipple, very gravely told the anxious parents that the boy was in a very dangerous predicament, an only waited a sudden fright or fall, to start for the great hereafter. They took him to another physician who quieted their fears, and advised them to let his heart beat on the right side, if it found it more convenient to do so. In the meantime, the boy grew to man's stature and appearance. Is well built; looks healthy; weighs one hundred and fifty pounds; is five feet, seven inches high; intelligent and good-looking. I found on a careful examination that the heart was located on the right side, and the impulse of the apex was visible one and one half inches below and half an inch to the left of the right nipple. The liver could be distinctly felt on the left side; the cardiac end of the stomach was on the right, as was the spleen; the left kidney was an inch and a half lower than the right one; the cæcum was located in the left inguinal region; the genital organs were well developed and normal; in the right clavicular region could be heard a very loud "bruit de diable;" the surface of the body was hyperæsthetic; and he was right-handed. I stripped and examined him in presence of several of his comrades including two of his brothers. One of those present thought that the right side was larger than the left; but the most careful measurement failed to detect any difference in size. His mother never bore twins. At his birth nothing unusual was noticed. Dr. August Förster, who is probably our highest authority on this subject, thinks that the situation of the heart on the left side is entirely dependent on the position of the fœtus in relation to the umbilical vesicle. And if, for any reason, the position is changed, the location of the viscera may likewise be changed; provided that this change occurs at a certain stage in the development of the embryo. He also says "we always find the viscera laterally transposed in that individual which lies to the right, in a double monster united at the umbilicus."

SHALL WE NEVER BLEED?

BY J. A. BEEBE, M. D., WESTFIELD, NEW YORK.

Case I.—J. G., plethoric, German laborer, came into the office and without explanation proceeded to divest himself of coat and vest and bare the left arm. Eyes red and protruding; face and forehead flushed and evidence of great excitement. Integument over median basilic showed cicatrices. An unfathomable gulf lay between my patient and myself as far as information by language was concerned. However, he was not drunk, and the removal of over one pint of thick black blood produced the most gratifying changes in his actions and appearance. His remark to a German barber who entered as he left was, "I am a sound man again now and will be for one more year."

Case II.—Richard W., aged seventy-four, Scotchman; always healthy; habits sedentary; diet luxurious; moderate user of ardent spirits. Patient arose from a hearty dinner, became dizzy and fell to the floor suddenly, the left side "giving out first." Pulse full and very strong, head hot, face congested, eyes starring. Partial coma and partial paralysis of left side very apparent. Emesis was induced at once and over one pint of blood taken from the median cephalic vein. The face became pale, the head cool, pulse soft and compressible, vertigo nearly absent. A cool room and *placebo* completed the measures adopted. Vertigo continued for several hours, but complete restoration of motor power occurred almost immediately.

TRICHINIASIS: FIVE CASES.

BY G. W. FUREY, M. D., SUNBURY, PENNSYLVANIA.

It has been my lot to be called to attend this, the only case, or group of cases, of this peculiar, tedious and dangerous disease, ever known to have occurred in central Pennsylvania.

Owing to the fact that I was entirely mistaken in my diagnosis of the first stage of the first case presented, and that this disease fortunately, *is* a very rare one, though liable in the practice of any physician to confront him with its mysterious, (unintelligible) and *apparently* harmless symptoms. I will endeavor to report my recent experience, as well as my memory and the few notes I was able to take will admit.

I shall discuss the disease in a general way first, and then in detail the phenomena presented me in a study of the first of the five cases.

About the 9th of December, 1880, a young man, H. L., by name, aged twenty-six, car repairer, called on me for treatment for what he described, and which I believed, to be a bad cold. I prescribed the usual remedies for it, telling him not to go to work for a few days. The next day I was sent for to attend him, and also other members of the family with which he was boarding. I was at once struck with the strange similarity of symptoms between him and the others, and concluding that a "bad cold" never appeared so uniformally at once, and in so many cases, I became impressed with the conviction that I had to deal with some unfamiliar specific affection, or the result of some ill-marked poisoned condition. A search of the premises, an investigation into the manner of living, condition of the heating apparatus, cellar, out-house, etc., soon restricted my suspicion to something which they had eaten. The peculiarity of, and the universality with which they were complaining of muscular "lameness" suggested *Trichiniasis.* I asked to see the pork they were eating; was shown the barrel and on examining some of its contents. was at once struck with its singular *leanness*, and peculiar pale, un-pork-like color, and general appearance. They told me that they had bought the hog of a butcher, dressed; that it weighed three hundred and seventeen pounds; had frame enough for four hundred and fifty pounds; that it might have been a "native" or a "western" hog.

I put the five patients on the treatment which I will mention, and requested them not to eat any more of the pork until told to do so. I removed several small pieces of the meat and called upon Professor G. G. Groff, M. D., of Lewisburg University for the use of his microscope, and for his assistance. After careful search, we were rewarded by finding in abundance—five in one field—*Trichina Spiralis.*

The five cases collectively, presented the characteristics of the authors, though individually they did not with the exception of the first case I saw. In all there was early languor, œdema of the face and eyelids, hoarseness and irritable fauces; while in only two was there any noticable swelling of the extremities. Only one was troubled with profuse perspiration; but one had gastric trouble; one was distressed for a few days with colic neuralgia and diarrhœa; two had considerable bronchial trouble; all had more or less congestion of the conjunctivæ, with corresponding lameness of the orbital muscles. The febrile stage—present in all the cases—also varied in degree and duration. Only one approached anything like delirium—H. L.—and he presented a very marked degree of disturbance of muscular and nervous coördination. The cephalalgia varied as to situation: being in the anterior portion of the head in all, while two had very severe pain in the posterior part. My attention was drawn to the constant presence of a special lameness of the trapezius muscle. Next to be complained of were the deltoid and brachialis, and those of the lower extremities. All had difficulty of deglutition.

I noticed in the morning a marked intermission of fever, but especially of the soreness, with a want of appetite. The two specially troubled with bronchitis, were also specially sore in the region of the inter-costal muscles and diaphragm. The distress, too, corresponded with the movements of the body, and direct pressure on the muscles. The case of I. W. suggested to me the belief that the intensity of the disease depends considerably upon the amount of parisites ingested, he being under dietetic restrictions for indigestion, and in consequence had eaten sparingly of the infected pork. Another reason for these cases being so mild, according to this same idea, is that the family had been eating of a quarter of beef, and had only indulged in a few dinners of the *boiled pieces* of the pork. That they had eaten of the large pieces, will account for the non-destruction of parisites lying deep down in the muscles, and therefore my five cases of trichinosis, which would probably have never occurred if the meat had all been sliced thin and well cooked. I have been impressed more than by anything else, with the conviction that it requires either a very considerable previous experience with the disease, or a *group of cases and a microscope* to establish a diagnosis.

When we consider that a man may have trichinosis and not be confined to bed; not "sweat profusely," not "cough extensively," nor even suffer from "nausea," nor "diarrhœa." The inefficacy of book descriptions in one's first case at least is very apparent. I mean that all the works I have read on the subject, have considered only typical cases, while here in one family, three of whom being of the same family habits, and condition, I found only one typical case, while the other four were so ill-marked and moderate that I should never have suspected any one of them, alone, of having trichinosis. For further assurance that we ought to be on the alert for such contingencies it is only necessary to say that while I have been attending my five cases, I have read in the papers of seven cases in one family, and four in another, in Franklin, Erie county, Pennsylvania, who were treated for typhoid fever until six of the first seven died before it was ascertained that the disease was trichiniasis, and also of one, a butcher in New York, who completed the "course of all the earth," and a brief sickness under the most modern approved treatment for rheumatism.

I have already mentioned that of my five cases there was only one typical case; and I have pointed out the most essential points in which the others differed from it; so that by refering to the general description, and comparing them with the record I purpose giving of the first and worst case, it will obviate the need of reporting all.

H. L., aged twenty-six, began to feel languid and distressed on Sunday, December 5, 1880. Concluding that he had only a cold, he resumed work as usual on Monday, Tuesday and Wednesday. Thursday morning, 9th., he felt entirely unable to go to work. He called on me for treatment for "his cold," and I prepared some medicine for *a cold.* Yet, I was not exactly clear as to the cause of the peculiar œdema of his hands and face; which he told me had showed itself on Monday. Friday evening I was called to see him and others of the family where he boarded. It was at once apparent that even a very bad cold would not account for his symptoms. His temperature was 103½°, pulse 100. Face, much swollen. Cough, dry and irritable. Bowels constipated. Tongue *not coated.* Considerable pain in anterior and posterior part of head. A dull, indescribable pain, or lameness in the muscles of the back, arms, and limbs, and considerable distress occasioned by efforts at respiration. Preferred to lie on his back. I noticed no inclination of flexion of the extremities. The fever began on Wednesday evening the 8th, and continued until Sunday. The œdema mentioned, which had attained its maximum by the 12th, wholly closing both eyes, was entirely gone by the 15th. On the 12th, I noticed that the dry, irritable cough brought from his throat a tenacious sputa considerably mixed with blood. The discharges from the nostrils, though not so tenacious were also colored. This peculiar symptom also affected, in the same manner one of the other patients, a brother. During the time it remained, which was about six days, he complained of dryness of the throat, and a prickling sensation. Profuse diarrhœa began on the 15th lasting to the 21st. The sweating was first complained of on the 17th and continued till 24th. It was worse at night. There was considerable emaciation.

When I first suspected trichinosis, I ordered thorough evacuation of the alimentary canal, which was followed by large doses of quinine. Then when I found the parasite unmistakably in the pork, I began the use of as large doses of sulpho-carbolate of soda as the stomach would bear. This with a liberal diet, and ammonia liniment externally, constituted the treatment. To-day, forty-two days after the first attack, I consider him to be out of danger, and able to resume his work.

In the face of the discouragement afforded me by the perusal of several works on the subject, Zeimssen's Cyclopœdia, for one of them, I must, with all defference, and some modesty affirm that were I to be called again to attend a similar case or group of cases, instead of pursuing the weird and shadowy pathway offered me by "the authors" I would, and I think conscientiously, follow my above mentioned treatment.

A CASE OF ORCHITIS.

BY A. G. MESIC, M. D., MILAN, MICHIGAN.

I was called about the middle of July last to see Mr. A., suffering with severe orchitis; the left side of scrotum swelled to the size of an ostrich egg. On inquiry I found that he had suffered from hydrocele for nearly twenty-five years; he being a man of forty. The rapid enlargement for some time past had driven him to have it operated upon, and he selected a man of the homœopathic persuasion, of Ypsilanti, to do the operation. He very unfortunately selected a man having but one eye, which no doubt was the reason the testicle was pierced to a great depth, by a very large trochar and canula, with no flow save that of blood? This resulted in the condition in which I found the patient on my first visit. I immediately set to work to reduce the inflammation, and on July 25, I operated with only a partial evacuation of contents, on account of blood clots clogging the canula. The hydrocele had been converted into an hæmatocele by the first operation. Sulphuretted hydrogen gas escaped freely. I removed about four ounces of the semifluid material and in two days operated with a larger instrument with some better success as to extracting contents. This time injecting iodine, and in three days repeated the operation, and so on until I operated five times, each time injecting the iodine; but still the operation was not a success, and I concluded to use the bistory and find out why it had not been. I therefore laid the tunica vaginalis open to the extent of easily introducing my dressing forceps, and removed a fetid blood clot, the diameters of which were three, two and one inches. Afterward a carbolized tent was used and in four weeks it had healed completely. Mr. A. tells me that his general health was never better than at present.

DISLOCATION OF THE SHOULDER-JOINT.

BY C. M. DICKSON, M. D., PORT CLINTON, OHIO.

Mr. J. O., age twenty-eight, Port, Clinton, Ohio. On the afternoon of January 14, the patient who is a tinner by trade, was doing some work at one of the grain elevators in the city, when he attempted to step backwards off of the plank on which he was standing; slipped and fell in such a manner as to dislocate the right shoulder-joint.

Patient called at my office, and the manner in which he carried the injured member was very characteristic, and I might say almost *diagnostic.* The elbow was raised from the side, and could not be approximated, while the axis of the limb was almost directly backward. There was almost total loss of power and any attempt to move the arm caused great suffering. It was supported by opposite hand. I gave the patient an anesthetic, when I was enabled to rotate the arm. I found the head of the humerus just behind the glenoid cavity and below the spine of the scapula (subspinous). The patient's arm was slightly extended and at the same time carried upwards and backwards describing a circle, when the head of the bone was felt to slip into its place. Examination showed that the patient had sustained no fracture of his arm in connection with the dislocation.

An evaporating lotion was applied; the arm put in a sling, and when last seen patient was doing nicely.

A FEW HINTS WITH REGARD TO THE APPLICATION OF COLD WATER; IN TYPHOID FEVER PARTICULARLY.

BY ELLEN F. POWERS, ZURICH, SWITZERLAND.
Medical Student.

The fever is more influenced by the cold bath during the night than by day. Where the bath cannot be given at all times it is necessary to know that the best time for applying them is: from five to seven in the morning; from eleven to twelve at noon; and seven at night. Two or even three baths are often required one after the other where the temperature is not essentially influenced by the first one.

The cold water pack is often used as a matter of convenience, and is a good substitute, but it is very important to know the fact that four packs given one after the other in quick succession are only equal to one full bath.

Ice compresses on the head and heart are recommended where serious affection of the same threatens.

Ice water injections in case of constipation are recommended.

A German professor has introduced the "wasserkissen," water pillow, which is filled with a mixture of ice and salt and renders the temperature 10°. The patient lies upon the same.

It gives me the greatest pleasure to announce the vital fact that since the introduction of the water treatment, the mortality in cases of typhoid fever has been reduced from twenty-seven to ten per cent. in the Cantonal Hospital of Zurich.

EDITORIAL BRIEFS.

SOME FACTS.—It is generally supposed that the requirements for admission to the homœopathic college at Ann Arbor are the same as those for admission to the department of medicine and surgery. At least we find in the calendar that the examination for admission to the homœopathic school "is intended to test the student's acquaintance with the fundamental branches of an English education, and his general intelligence and capacity to appreciate and profit by professional instruction." With these facts in view, the following may be of some interest. Hearing that two ladies, who had failed in passing the examination for admission to the department of medicine and surgery, had entered the homœopathic school, we inquired, as to the truth of the statement, of the Secretary and Treasurer of the University. Both these officers confirmed the statement. We then visited the secretary of the department of medicine and surgery and obtained the examination papers of these ladies. These papers are so interesting that we give one of them below, leaving our readers to draw their own conclusions. The other paper is still more interesting and we may publish it sometime.

EXAMINATION.

(1) *Question.*—State your name, age and previous residence?

Answer.—Mrs. H.

(2) *Question.*—What schools or colleges have you attended, and what branches of study have you pursued?

Answer.—Professor Frost female college didnot Finish nothing but the common Brances.

(3) *Question.*—Have you studied medicine, and, if so, state when you have studied and for how long?

Answer.—I have at home 4 years practicing under Prof. March.

(4) *Question.*—Not answered.

(5) *Question.*—What will one thousand dollars placed out at *simple* interest (six per cent) amount to in ten years? What will the same sum amount to at the same rate, and in the same time, at *compound* interest?

Answer.—60 $1.20.

(6), (7), (8), (9), (10), (11), (12), (13), (14), (15) and (16) questions not answered.

(17) Correct all errors of spelling, grammar and punctuation in the following paragraph;

"Samivel, Samivel;" said Mr. Weller in reprochful accents: I didn't think you'd ha done it—arter the warnin youve had o' your fayther's wicious perpensities, arter all I've sed to you uppon this here werry subject—arter activally seein and bein in the Kompany of your own mother in lor, vich I should ha thot Was a moral leson as no man could ever ha forgotten to his dyin day? I didnt think you'd ha done it Sammy, I didn't think you'd ha done it,

Answer.—Samuel said Mr. Weller in reprochful accent, i did not think you would have done it After the warning you have had From your father wise proposition after all i have said to you up on this Subject after actualy being in the company of your Mother in Law which I thought was a moral lesson which no man, could have forgoten to his dying day

(18) Nòt answered.

(19) When and by whom was the Continent of America discovered? Where was the first English settlement made in the United States?

Answer.—By Americus Vespetus Philadelphia. It is said Colombus discovered America but it has since been disputed he discovered the Iland and Americaus Vaspushous it is said was the first discoverer.

(20) Not answered.

(21) How are the Senators and Representatives in Congress selected?

Answer.—By the vote of the people.

(22) What is the principal source from which sugar is obtained, and from what country or countries does the main supply come?

Answer.—By evaporation, the South.

(23) Not answered.

INDEPENDENT DOCTORS.—The members of the faculties of the infamous, but now outlawed, Medical Colleges in Philadelphia, associated with some of their graduates, are now trying to obtain a new charter, under which they can again play their old games of selling diplomas. Some of the articles of the charter for which they petition are worth reading, and are here presented to the readers of THE PHYSICIAN AND SURGEON.

Article II of the charter reads thus:

ARTICLE II.—The objects for which this corporation is formed are:

First.—To secure our natural and constitutional rights against tyrannical, selfish and unconstitutional legislation, which has been accomplished in several States and may be attempted in others by the united efforts, industry and the selfish motives of the self-styled "regular" physicians and their allies.

Second.—To protect all honorable and honest practitioners of medicine, of whatever school or system of practice, against the persecutions of county or State societies, and city and State boards of health, whose actions and efforts are devoted to the purpose of crushing out all liberal practice of medicine, rather than to promote and conserve the sanitary welfare of the people, while the whole tendency of the actions of these self-constituted medical dictators is to stop the progress of scientific medical investigation and all rational medical practice, which during the last fifty years has almost completely revolutionized medical theory and medical practice.

Third.—To promote and encourage medical investigation and progress by the preparation of papers and lectures to be read or delivered at the meetings of the society, and to institute investigations on such medical subjects as the society may deem of sufficient interest and importance to the profession or the public, including anthropology, etc.

Fourth.—To educate the public upon subjects relating to health and sanitary reform, and impart knowledge on all questions in relation to the physical and mental irregularities of our people; and to teach them the best means of maintaining public health, and to avoid the many avoidable diseases now afflicting society and individuals.

Fifth.—To discourage in the medical profession the employment of those means and practices which tend to encourage vice and increase the social evil, by all moral, honorable and legal means; and we do bind ourselves each and severally to report any cases of abortion that come to our notice to the proper authorities, and do all in our power to bring such malpractitioners to a speedy trial.

Sixth.—To promote the interests and defend the rights of all medical schools which are conducted in an honorable and legal manner according to their charter powers, irrespective of school, pathy or medical theory and practice, and to discourage or denounce all medical schools granting diplomas to persons who have not pursued a regular course of medical study and in violation of their charter rights.

ARTICLE III.—The place of business of said corporation shall be located in the city of Philadelphia.

ARTICLE IV.—The corporation is to have perpetual succession.

One avowed purpose is "to denounce all medical colleges that issue diplomas in violation of their charter rights," yet *seven* of the *eleven* incorporators have been connected with the colleges of Buchanan, Paine or Miller. G. G. G.

CINCHONIDIA SALICYLATE.—We have used this preparation, now presented to the profession by Messrs. Wyeth & Bro., of Philadelphia, in nine cases of severe neuralgic and rheumatic pains, and have found it to be the *best* remedy that we have ever tried in such cases. V. C. V.

MEDICAL NEWS.

"An Edisonian Anæsthetic."—According to the *London Lancet*, Professor Edison's wonderful electric anæsthetic is a mixture of chloral hydrate, chloroform, ether, nitrate of amyl, morphia, camphor, alcohol, oil of peppermint, salicylic acid and oil of cloves. These are all placed in one mixture, so that if one fails, some other will possibly hit the mark. This wonderful compound has been "*invented*" and we believe *patented* by Mr. Edison.

Case of Perforation of the Membrana Tympani from Ascaris Lumbricoides.—Dr. Lewis W. Reynolds, reports an interesting case of a woman affected with the above named parasites. Under treatment of santonine, seventy-four worms were discharged, the majority per rectum, some by vomiting and ten through the ears. An examination with the auriscope revealing the fact that the both tympanitic membranes were perforated. Recovery followed with hearing slightly affected.

Treatment of Choleraic Diarrhœa by the Hypodermic Injection of Morphia—W. Hardman, M. B., from an "extensive experience of over three years' routine use of this method" says:

"(1) Choleraic diarrhœa can be always immediately stopped by the administration of morphia hypodermically.

"(2) If severe diarrhœa have persisted over ten hours in spite of the administration of morphia or opium by the mouth frequently, the hypodermic injection of morphia should be at once resorted to.

"(3) If cramps and collapse be present, the purging persisting, no time should be lost in administering morphia subcutaneously in full dose.

"(4) The treatment is absolutely free from danger, even if temporary suppression of urine or albuminaria be present.

"(5) When not curative, the treatment is diagnostic, enabling us to fortell with certainity the advent of dysenteric symptoms.

"(6) The best preparation of morphia for this and other hypodermic purposes is the sulphate, on account of its smaller liability to undergo change into apomorphia."

Thirteen cases are cited, which seem to have been controlled by the medicine. Purging ceased *instantly* and *permanently*. But like most other specifics, it works best in the hands of its advocates, for in the same number of the *Lancet* (December 1880), C. MacDowall, F. R. C. S. E., of the Bombay Army, India, states that the hypodermic injection of morphia has been faithfully tried in India, and that although the treatment is regarded in a favorable light, the average success is scarcely above the usual one in severe epidemics." It is suggested that the "Choleraic Diarrhœa" of Mr. Hardman may mean only a diarrhœa bearing some resemblance to cholera. The treatment has been used and abandoned repeatedly in India, but is not now considered an antidote to cholera poison. The treatment is worth trying in all cases.

CORRESPONDENCE.

TRICHINA.

Dear Dr. Vaughan: I fed to a cat about a quarter of a pound of lean muscle of the pork which contained trichina spiralis, and from the same mess which produced trouble in cases reported by Dr. Furey (see page 112). At the end of five weeks, I had the cat killed, and a careful examination of triceps, latissimus dorsi, gluteus, superficial pectoral, external oblique and of the walls of the stomach, *failed to show a single trichina.* I should say, that the cat at no time after eating the meat, seemed at all indisposed. A cat's stomach is different from a man's, and "what is food for one is poison for another." There was no mistake about the meat being infected, as I first detected trichina before giving it to the cat.

Respectfully, G. G. GROFF.

Lewisburg, Pennsylvania, February 3, 1881.

CHICAGO LETTER.

The annual mortality report of Chicago for 1880, shows there occurred during the year 10,462 deaths; a daily average of 28. There were 3,147 under one year of age and 5,640 under five years, making 53.52 per cent. of the number of deaths under five years of age. Of this number of deaths, 5,546 were males; 4,914 females; 7,966 were single; 1,898 married; 386 widows and 212 widowers: 3,903 deaths were caused by zymotic diseases, or 37 30 per cent of the total mortality.

Diphtheria took 930; croup, 533; scarlet fever, 339; measles, 129; small-pox, 43; whooping-cough, 68; typhoid fever, 171; phthisis pulmonalis, 853; pneumonia, 633; cerebral apoplexy, 106; cerebral meningitis, 289; heart-disease, 264; enteritis, 196; alcoholism and delirium tremens, 51; old age, 196.

Chicago like all cities has parts that are packed with classes of poor people, portions less perfectly drained and sections that are less improved than others. In these localities a greater mortality is expected, and such was the case last year in this city as may be seen in the following table, which gives the population, number of deaths and the rate to 1,000 of populaiion of each ward in the city.

Wards.	Population.	Deaths.	Rate to 1,000 of Population.
I	14,765	123	8.33
II	20,099	276	13.73
III	16,798	189	11.30
IV	28,102	427	15.20
V	47,500	913	19.20
VI	40,890	847	20.70
VII	37,457	674	18.00
VIII	37,146	622	16.74
IX	17,477	265	15.20
X	15,754	329	20.70
XI	22,364	306	13.68
XII	27,914	345	12.40
XIII	20,857	394	18.90
XIV	56,534	1,579	27.93
XV	28,863	614	21.20
XVI	23,771	499	20.90
XVII	24,676	534	21.60
XVIII	22,311	295	13.20

At a glance from the rate of deaths above given, one can tell the filthy and crowded wards from the clean and more sparsely inhabited. For instance taken the XIVth ward, portions of which are so packed with a class of *human* (?) beings, they probably never inhale a breath of pure air or even comparitavely so, unless from homes; who live on streets that are low and always muddy, therefore necessarily foul and who dwell in houses with damp cellars or basements, and what do we find? a mortality of 27.93 per 1,000 or one in every thirty-five persons, and too during a year when no particular plague visited this district, except *unpure air* or *water*. On the other hand, take the XIIth ward, in which the streets are nearly all well drained and comparatively clean, and we find that death visits its people less than one-half as frequently.

With the exception of the river which the XIVth ward has on its eastern border, the natural surroundings of the two wards are quite similar. Both were originally low, flat, treeless prairie, more or less covered with water, over which it was impossible for teams to drive and even unsafe at times of the year for man to cross. The cold winds from the lake are impartially distributed to both of these wards. In fact, there is no particular difference between them, except one is clean and inhabited by people who try to keep things about them cleanly while the other is filthy and filled with a class who is unable to do otherwise or do not care to live in anything but dirt. The latter, for this luxury, are able to say to their friends in the XIIth ward, that they employ twice the number of undertakers, and occupy about as many again lots in the cemetery.

It is a noticable fact, that a large number of deaths occur from pulmonary difficulties. While the lake on which Chicago is situated has a delightful effect upon the climate during the summer months, (when the lake is chilled with the winter store of cold, and a similar but opposite effect in the fall before the water has parted with the summer heat, later in the fall and still worse in the spring when the lake is covered with ice), the winds from this quarter are simply fearful and bring death to hundreds yearly.

Not infrequently, as the wind changes from the south into the north, the thermometer within twelve hours falls 40°. When these facts are known it is not at all surprising that hundreds in this city die every year of phthisis and pneumonia.

While the difficulties in the XIVth ward referred to above can comparatively be readily remedied, the sudden climatic changes cannot, and they will always be a source of great suffering and the cause of many deaths to the inhabitants of Chicago.

X.

TRANSLATIONS.

Translations from Russian Journals for THE PHYSICIAN AND SURGEON.

BY RALPH D'ARY, M. D., ROMEO, MICHIGAN.

NEPHROTOMY AND NEPHRECTOMY (CONTINUATION): DIRECTIONS FOR OPERATING.

Superficial section should be made along the external border of the sacro-lumbalis, parallel with the line of the spinous processes, beginning at the lower margin of the eleventh rib and extending until midway between the last rib and the crest of the ilium. Deep section is made from the end of the twelfth rib downward. Here the latissimus dorsi and the posterior layer of the lumbar fascia are cut through and the margin of the sacro-lumbalis is drawn away towards the median line, by means of blunt hooks. In this way the middle layer of the lumbar fascia is exposed, which is now carefully cut through along the whole extent of the wound, laying bare the quadratus lumborum. Between this muscle and the middle layer of the lumbar fascia pass the last intercostal and first lumbar arteries, which are cut through and ligated. Next the quadratus lumborum is cut through, exposing the adipose capsule of the kidney. Between the quadratus lumborum and the anterior layer of the lumbar fascia we find the last intercostal and first lumbar nerves, crossing the wound transversely and diagonally. Some surgeons recommend to divide them; others, to avoid doing so, by giving to the deeper part of the wound a crescentic shape.

If it is only required to open the distended renal pelvis, or the kidney itself, (if it be converted by suppuration into a mere pouch full of fluid) this can now be easily accomplished, since the enlarged kidney is in view, as soon as its adipose capsule is divided. The cavity should be opened at a point where the fluid is nearest the surface. Having made a puncture, it should be enlarged with some blunt-pointed instrument, and then the calculi may be removed with the finger or forceps, or if they be large, they may first be crushed with a lithotriptor. It is frequently required to leave a drainage tube in the cavity.

It is different when a whole kidney has to be removed. There is then no tumor obtruding to view, and therefore it is more difficult to find the organ, especially when the operator has failed to cut down upon the exact location of the kidney. In such a case it is advised to look for the kidney at the point of intersection of the twelfth rib with the margin of the sacrolumbalis, where it will invariably be found. Generally, however, the kidney is easily felt after cutting through the quadratus lumborum. Sometimes it is rather difficult to separate the kidney from the surrounding adipose tissue, which should be done carefully with the fingers: First, by using one or two fingers, the lower end of the gland, which lies on the same level with the wound, then, by means of three fingers, also the upper end is drawn out from under the ribs. The fatty tissue adheres closest to the upper and lower parts of the kidney, so that it is sometimes necessary to use the knife or scissors. When, however, these ends are liberated, it is easy to draw the kidney out far enough to lay bare the hilum and ligate the vessels. Heinecke directs to ligate them all *en masse*, by double ligature, transfixing the stem with an aneurism needle, having of course first separated all the fatty tissue, either by means of the fingers or forceps. Then the kidney is cut off, care being taken that the ligatures do not slip off the vessels. This completes the operation, the removal of the kidney allowing the peritoneum to be seen in motion with every respiration.

It happens sometimes that the upper end of the kidney either firmly adheres to the rib or cannot be recovered from under it. In such cases it is advisable to resect about four centimeters of the twelfth rib, taking great care not to wound the pleura, which reaches to the upper border of the rib. Sometimes it is feasible first to ligate the blood-vessels, and subsequently to teaze out and remove the kidney, but generally the latter operation has to be done first. When it is possible to first ligate the blood-vessels, then after having done so, the scissors should be used to divide the stem, but not too near the ligature, lest it should slip off. The stem having been divided, the kidney is then removed. If it has formed close adhesions with the surrounding tissues and its removal is imperative, Simon advises to lay open the capsula fibrosa, and to peel the kidney out of it, leaving the capsule in the body. In this case the vessels are ligated in the hilüm, inside the fibrous capsule.

During and after the operation antiseptic precautions should be strictly observed. If this is done, even wounding the peritoneum is not considered especially dangerous. Of course pressure or other conditions liable to produce hemorrhage should be strictly avoided, especially soon after operating. Before the operation, the bowels should be unloaded, and the patient placed on light diet and treated with opium afterwards. He must urinate in the recumbent position, through a catheter.

Extra-peritoneal removal of one kidney hitherto has been performed eight times. Two patients, of Simon and Langenbach, recovered; four—of Simon, Bruns, Peters and Durham—died; the result of one operation, Jessop's, is unknown; and one patient, Zweifel's, was doing well four weeks after the operation. Each operation of Simon lasted about forty minutes, whilst Bruns operated for two hours. The most difficult part was the removal of the kidney from its adipose capsule, which also occupied the most time. Bruns could not properly conclude his operation, although he had resected part of the twelfth rib. When Simon removed a kidney for calculus, he slightly injured its fibrous capsule. Zweifel found it impossible to remove the kidney without taking it out of its fibrous capsule, for the gland was so much atrophied and so friable that it was hardly recognizable. In one case Simon could not ligate the stem in two parts (by carrying the ligature through it) as he could not distinguish the veins, which he feared to wound. In one case, of the same operator's, hemorrhage followed the operation, although the arteries had been ligated. It was arrested by fresh ligatures. One of his operations was followed by vomiting, which, however, he attributes to the chloroform. In a woman, from whom Simon removed a healthy kidney, the quantity of the urine voided became normal on the fourth day after the operation.—*Sovr. Med.*

Translations from Scandinavian Journals for THE PHYSICIAN AND SURGEON.
(IN ABSTRACT).

BY JOHN A. OCTERLONY. M. D., A. M., OF KENTUCKY,
Professor of the Principles and Practice of Medicine, Clinical Medicine, and Physical Diagnosis, in the Kentucky School of Medicine.

REMARKS ON EPIDEMIC PAROTITIS AND ITS VEGETABLE MIASM.

BY DR. FREDERICK EKLUND, STOCKHOLM, SWEDEN.

The basis of this interesting and instructive article, is said by its distinguished and philanthropic author to have been an epidemic of parotitis observed and studied by him at the naval station in Stockholm, during the months of March, April and

May, 1878. It occurred, as usual, toward the close of winter, which was remarkable for its mildness and freedom from falling weather. The scanty snow melted early in March, during which unusual warmth prevailed. In April and May, the weather was very changeable. The nights in May were very cold, however, causing still water to be covered with ice nearly one-half inch thick, hence the ground long remained damp. The sea-water was not less than 2.5 feet below its ordinary level, and long tracts of the low beach commonly under water lay bare. Microscopical examination of stagnant water, of samples of the soil from the beach, also of water and mud from some localities connected with the history of some of the cases revealed ennumerable multitudes of common micrococci, bacteria bacilli and vibriones which as is known belong to the second series of the class of protophytes comprising two of its forms which contained no chlorophyl, and to the third order or chizonycets which multiply by cell partition and to the eighth family or bacteria in most forms of which the cells divide only in one direction. Of the different kinds of bacteria were found not only cells which were not joined into threads but which after fission either at once separated and thus were globular, hyaline micrococci in the proper sense, or continued to adhere in pairs or were joined four together or several in a row and then inclosed in an exceedingly fine membrane, and even elliptic or short cylindrical, entirely colorless bacteria. Of the other kind, in which the cells join to form threads there were found both straight, very slender but long rod-like bodies and bacillum tenue also rectangular in which every two were united at the ends and bent toward one another at an obtuse angle. Bacillum ulna—and besides these enormous quantities of wavy and spiral threads or vibriones, vibrio rugula, spirillium tenue velundula, which are not to be confounded with Obermeier's "spirochæte febris recurrentis."

The micrococci evinced no independent motion, but yet were not still for a moment as they were forever following the currents of the fluids examined.

Bacillum ulnæ, the vibriones and the spirilli, on the contrary, moved about independently in different directions, sometime with their whole length like eels, then only with the tail then again performing a whirling, twisting motion. In the baccillum ulnæ could be plainly seen how after division the baccilli fell apart and separately continued their screwlike movements.

These protophytes Dr. E. believes to constitute the miasm of the epidemics of parotitis which are so frequent in Sweden. The cases observed in this epidemic ran, almost without exception, a light and regular course.

In one case observed in June, and hence not included in the forty-four cases—there was suppuration of the left submaxillary gland, the patient had been subjected to bread and water diet as a punishment. In none of the other cases did the hyperæmia and œdema of the glands terminate in suppuration. Recovery took place in all. Metastasis from the parotid to the left testicle occurred in one. In another case, there was metastasis from the left testicle to the parotid and submaxillary of the same side.

A recent attack of scarlatina offers no immunity against parotitis as shown by one of Dr. E.'s cases, and another demonstrates that suckling infants do not enjoy perfect immunity against this disease.

Different and conflicting opinions are still entertained as to the cause of so-called spontaneous parotitis which may occur both sporadically and as an epidemic. Some regard cold and damp as the only positive cause. Others hold that a comparatively benign catarrh of the glandular ducts is the essential condition. A third class attribute the disease to a hypothetical "contagium," while a fourth class insists that there can be no question whatever of contagiousness in idiopathic parotitis.

In regard to the view that parotitis is caused by cold and damp, the writer believes that only a comparitively small number of the patients hold it, and that the great majority of them do not refer the disease to this case and insist that they have not taken cold. Cold probably has some influence in predisposing to the disease, but rarely if ever is the essential cause of it.

A microscopical investigation of the urine generally furnishes unequivocal evidence, whether in any given case the cause is cold or miasma. If the bacteria already described suddenly appear in large numbers in the urine of a patient, in which it is known they did not previously exist, the cause of the parotitis is miasm, but if no bacteria are present in the urine, the disease is due to taking cold. Furthermore, one may observe during epidemics of parotitis acute swellings with œdema, in parts of the body or in lymphatic glands, which have been particularly well protected against colds. Finally he conludes that if cold and damp were the two causes of epidemic parotitis it were impossible to understand why the men at work in the rigging of the corvette "Eugenie," during the icy cold, windy and rainy days of May, 1878, all escaped parotitis, while of those who were at work in the hold of the vessel or on the low marshy beach, where the bottom, the soil and the air were fairly alive with the decomposition bacteria already described, a considerable number became attacked with parotitis.

There are also a number of facts, militating against the view that the essential feature of epidemic parotitis is a benign catarrh of the glandular ducts. The mucous membrane of the orifice of the duct of steno, and the immediate vicinity is generally pale and not at all swollen during the course of the disease. Neither does the parotid secretion present to the naked eye any of the changes in quantity or quality that ordinarily occur in catarrh.

During its course there is rather a diminution than an increase of the parotid secretion. It is highly probable that the miasm finds entrance to the organism with the air breathed and sometimes also with the drinking water, yet the patients rarely have pulmonary or gastric catarrh which also tends to show that catarrh is not the main feature of parotitis, and indeed all experience is opposed to such a view.

The assumption of a contagium as the cause of this disease is exclusively founded upon analogy with other diseases, *e. g.*, whooping cough, etc. In the present state of science it is vain to endeavor to distinguish between miasma and contagium, it is simply a war of words. For what is meant when it is said that pertussis or diphtheria or cholera arise from miasm, but are propagated by contagion? Observation has taught us that it is one and the same low organism, which, when developed outside the human body is called a miasm, but after it has taken root and has passed through the same stages of development in different parts of the body, *e. g.*, the microphyte of pertussis in the bronchial mucous membrane, that of diphtheria in the soft palate, etc., and thence in various ways has transmitted the disease to other individuals, receives the name contagium.

This author thinks with A. Laveran that there can be no doubt of the miasmatic origin of parotitis and that its contagiousness is as well established as that of erysipelas, cholera and the plague. In this sense contagion is not synonymous with transmissibility by direct contact, but is intended to convey the idea that some miasm has been eliminated in the excreta of the patient and has gained a hold in a soil favorable for its development. In this disease it is especially the urine which is the means of excretion. Nevertheless it is quite certain that air currents and water courses, and now and then impure drinking water are more powerful factors in the dissemination of the disease than individuals.

In numerous microscopical investigations of the urine of parotitis patients made by Dr. E., during the spring of 1878, he constantly found innumerable quantities of bacteria above mentioned. They were most numerous toward the close of the fever, and during crisis when the glandular swelling was rapidly diminishing or when copious perspiration had set in. The bacteria were entirely absent in the urine of patients who had not been exposed to the epidemic influences in question.

How do these bacteria find entrance into the organism of the patients? Dr. E. thinks they are admitted either in the air through the lungs or in drinking through the stomach. Although some deny that these bacteria are found in the air, Dr. E. thinks it possible these exceedingly small organisms may rise from the damp ground or the water with the evaporating moisture and that they may be carried in various directions by air currents or winds. It must at least be conceded that in a dessicated condition they may circulate in the air with the dust and be scattered by winds, or by sweeping of rooms. He did not investigate the drinking water, but remarks that it is very common in Sweden to find billions of these bacteria in impure drinking water and especially such as is kept in old rotten wooden kegs. The possibilities that these bacilli vibriones and spirilli having once entered the buccal cavity may penetrate directly into the parotid, submaxillary and sublingual glands through the ducts of steno and wharton and the sublingual ducts cannot be denied, especially as Dr. E. has found numerous bacilli in the secretion at the orifices of these glandular ducts in parotitis patients.

The circumstance that in more than one half of the patients general symptoms such as rigords, fever, lassitude or aching in the limbs preceded the local symptoms demonstrates that the blood disease which must be attributed to the presence of the above mentioned bacteria, or at least of bacterium termo and micrococci, in the circulating fluid is very frequently the primary lesion.

In those cases where no febrile disturbance preceded the local phenomena the most ready explanation is that swarms of bacteria have passed into the blood from the lungs and stomach and have formed emboli in the capillaries of the affected glands. The question here can of course be only of emboli of bacilli whose longitudinal axis in not a few specimens is greater than the transverse diameter of the smallest capillaries of the glands while the micrococci and bacterium termo here referred to are so exceedingly small that they necessarily pass entirely unimpeded through the finest capillary vessels. The very sudden appearance of the local symptoms, and also the fact that in nine cases where only one parotid was affected, in five it was the left, speaks decidedly in favor of emboli.

That in an equal number of cases (fifteen to fifteen) the left parotid became affected before the right, speaks at least not against emboli. The assumption that embolism is the mode of origin of parotitis is confirmed by the observation that the arteries of the organs usually affected form almost rectilinear continuations.

Dr. E. thinks it highly improbable that the bacteria could gain admission to the glands through the lymphatics. As it is known that anæmia is the consequence of embolism, and that in parotitis there are swelling and œdema of the glands one might be tempted to see in this a contradiction which must render the theory that this disease is due to an embolic infiltration of the glands with bacteria entirely untenable. To do away with this apparent contradiction it is necessary to call attention to a remarkable arrangement of the salivary glands and probably also of the testicles and lymphatic glands.

If the supply of arterial blood, *i. e.*, oxygen, is cut off from the salivary glands these begin to show signs of exhaustion (*Erreguny der Hemmung Nerven*) so that no further secretion takes place, although irritation of the nerves of the glands continues and fluid material for the elaboration of saliva is present in abundance. The reason is that the irritation has induced hyperæmia with accompanying œdema and accumulation of serous fluid in the connective tissue of the gland. Physiology and pathology are here in perfect accord as they should be, and this physiological experiment, offers a perfectly satisfactory explanation of a manifestation, which hitherto has been regarded as one of the darkest enigmas in pathology.

Irritation of the nerves in the parotid, which as will be remembered, are branches of the auriculo-temporal nerve which itself is a branch of the inner division of the inferior maxillary nerve. One of the principal branches of the Cæsserean ganglion of the trigeminus (besides the nervous petrosus superficiatis minor, from the facial, otic ganglion), is demonstrated by the presence of intense pains, which in not less than twenty-seven out of fourty-four cases were complained of by the patients, as the first local symptom of the disease, after which the swelling set in.

The abnormal irritation of the first named branches of the trigeminus and facial nerves, caused by the ceaseless movements and further development of the bacilli (bacillus tene and bacillus ulnæ) at the point of deposition is followed by dilatation of the vessels, the blood courses through the gland much more rapidly and in greater quantity, and flows off by the veins, of a bright, red color, which latter pulsate and spurt like arteries. As soon as the nerves of the gland no longer respond to the irritation exerted by the bacteria the pains cease, then the tenderness abates, and lastly the congestion and œdema disappeared, and the latter is absorbed. This is resolution. At this stage the bacteria pour chiefly into the left renal artery. If they find their way into and form emboli in the left spermatic artery, a metastatic orchitis of that side ensues. In a few days (Nach Durchsenchung des Organismus) most of the bacteria have disappeared from the urine, but a smaller number will as a rule be found in this secretion during the rest of the patient's life, indicating that he has been infected with these bacteria, and has gone through an attack of parotitis.

It follows from what has been set forth above that miasma of epidemic parotitis is a comparatively mild disease germ.

Anæmia is a rather frequent sequel, and in fact, upon the destructive action of the parasites, but principally upon the fact that the patient is for a number of days unable to masticate on account of the pain induced by this act. The anæmia, might however, be prevented by the administration of concentrated food in liquid form, such as eggs and milk, butter, etc.

That the disease generally runs a favorable course, must in the first place be ascribed to the comparatively benign nature, of the miasma, and in the second place, to the circumstance that the persons attacked have usually been perfectly healthy prior to this illness, and have not been weakened by previous sickness, want or depressing mental emotions. Both testes or both ovaries become affected in one per cent of the cases. This complication is chiefly important on account of the atrophy which is likely to follow and the consequent sterility. During this epidemic, Dr. Eklund observes that many of the men who reported at sick call of mornings complained of frequent chills, fever and headache, others complained of being cold constantly. An investigation of these cases showed that they had all been exposed to the same epidemic influence (bacteria in the air and in the drinking water) as their comrades suffering from parotitis, and that many of them had formerly had that disease. Some, however, could give no satisfactory information on this point. He naturally regarded these cases as intermittent fever, especially as he had found malarial miasm by the low sea-shore and in the muddy soil of the vicinity. On microscopically examining the urine of these patients bacteria (chiefly those above mention) were found in such enormous multitudes that they must be considered to have occasioned the febrile disturbances.

This offers a natural explanation of what immunity actually is, and demonstrates also how important it is in point of diagnosis, when nearly allied disease like intermittent and parotitis prevail simultaneously, to determine by microscopical examination of the urine to what category a particular case may belong. A few of the latter class spoken of suffered later on from chills and fever. In the pseudo-intermittents induced by the infection from bacteria just alluded to, Dr. E. thinks the use of quinia to say the least, superfluous.

TREATMENT OF UNUNITED FRACTURE.

Dr. T. Leof, relates the case of a transverse fracture of the tibia which had remained ununited for four months. Electro-puncture was then employed twice. After the first application of five minutes' duration, there appeared slight redness. Two weeks later another application of ten minutes' duration was made, with the result of producing the desired inflammatory reaction: redness, considerable swelling, pain, and heat, after which the callus promptly began to grow, and the fracture united properly in two months. During all the time of treatment the extremity was steadied by the common splint and bandage.—*Med. Obozrania.*

OLEUM EUCALYPTI IN SURGERY.

The *Med. Vestn.* relates at length some experiments made by Dr. Busch, with a view to substituting that oil for the carbolic acid in Lister's bandage. We give the result: The oil produces hardly any irritation of the wound, when it is not hermetically covered; but its action is corrosive, even when used much diluted, when it remains in contact with the body—even the sound skin under hermetic covering. This double action is explained by the abundance of azone developed by the oil, the azone, when not carried off by the atmosphere, uniting with the tissues and acting as a caustic.

Translations from French Journals for THE PHYSICIAN AND SURGEON.
BY PROFESSOR PAYNE, UNIVERSITY OF MICHIGAN.

NITROGEN PROTOXIDE AS AN ANÆSTHETIC.

The history of anæsthetics begins and ends with nitrogen protoxide. The use of this gas marked the very beginning of the method, and to-day it characterizes its final perfection. Its property of destroying sensibility to pain, perceived by Humphrey Davy at the beginning of this century, and rediscovered in 1844 by Wells, has since been utilized for operations in dental surgery in America, upon the continent, and, we may say, throughout the entire world. One fact will give an idea of the extreme popularity of this agent. In one single establishment in New York, that of Colton, nitrogen protoxide has been administered to a little more than ninety-seven thousand persons within a period of thirteeen years, from February, 1864, to may 1877. No serious accident has been reported. Surgeons, however, derived no advantage from a process that produced insensibility for only a few seconds. Nitrogen protoxide, excluded from general surgery, was restricted to the practice of dentists, and seemed destined to remain so, till Bert, in 1878, made known a new method which increased its efficiency to an extraordinary degree, and gave an indefinite extension to its applications.

It should be observed that in the practical administration of anæsthetics, it is always a respirable mixture that enters the lungs, as a mixture of atmospheric air and the vapor of ether or of chloroform, permitting a free exercise of the respiratory function, without any risk of asphyxia. The first question that the physiologists were to raise, with reference to nitrogen protoxide, was whether this gas in a pure state was respirable and could be taken into the lungs without danger. Experiment alone could settle this question, for theory allows the contrary hypothesis. Nitrogen protoxide, like atmospheric air, contains oxygen; it contains even more of it, a third of its weight, while the air contains only a fifth. Besides, it supports combustion. It was proper then to inquire if this combination could be utilized by the body as atmospheric air is, and in case the blood could not withdraw the oxygen from this compound, whether the tissues themselves could make use of this oxygen united with nitrogen, as they do of the oxygen in the globules that are each moment presented to them by the blood.

Experience has given a negative answer. Animal and vegetable tissues make no use of nitrogen protoxide. Whatever may be said by surgeons like Demarquay, and by physiologists like Leonget, the blood makes no more use of this gas than the tissues themselves. The blood globules, the ordinary conveyors of gases, do not become charged with nitrogen protoxide; they leave it in the liquid of the veins in which they are themselves contained. In this liquid, the plasma, nitrogen protoxide can be dissolved as air is dissolved in water, in accordance with the physical laws of Dalton.

The protoxide is then irrespirable, and inhalations of the pure gas must cause asphyxia as in the case of other indifferent gases. In fact, animals speedily die, presenting the ordinary convulsions of death through privation of air. Similarly, it is fatal to man, and it is "to commit a crime against human life to administer it in a state of purity." It is as dangerous as any other gas unfit for respiration. It is even more so; for a man who is plunged into an inert atmosphere, is warned of the peril he incurs by the oppression and the terrors of asphyxia; while the intoxication produced by the protoxide masks the death that threatens him, and destroys the instinct of self-preservation that might urge him to seek an air that is respirable.

Then how account for the harmlessness of the celebrated tests made by Davy and his countrymen at the beginning of the century? It is because they did not use the pure gas; they inhaled a mixture of the protoxide and air. The bags of gummed silk in which the gas was stored allowed oxygen to penetrate their porous sides.

At the same time that nitrogen protoxide induces anæsthesia in man or animal, it also causes asphyxia. The two phenomena are concurrent; and it was an error to think that they were related to each other as cause and effect, and that asphyxia was the occasion of insensibility. This was to proscribe nitrogen protoxide; for it could destroy sensibility only by destroying the life itself. On the contrary, the experiments of Paul Bert have proved that the coincidence of the two phenomena was not necessary, and that the property of the gas as an anæsthetic was distinct from its power to induce asphyxia, and independent of it. Nitrogen protoxide, in fact, produces upon the nervous centers a peculiar effect which, superadded to asphyxia, gives to it a special characteristic. In order that this paralyzing action may be produced, it is essential that the plasma (*liqueur du sang*) contain a considerable quantity of the protoxide, that it be saturated with it. If this gas be mixed with air, and in this diluted state be presented to the blood that traverses the lungs, enough will not enter the circulation to paralyze the nervous centers, anæsthesia will no longer take place. Hence the failure of the efforts made by Wells. Experiment proved that neither the pure nor the diluted gas could be employed; not pure, because in destroying sensibility, it at the same time produced asphyxia; not diluted, because it then ceased to act. As asphyxia always counteracts anæthesia, the use of the protoxide was found to be restricted to operations of short duration, during which respiration could be suspended without real danger. When dentists administer the pure protoxide, anæsthesia appears twenty or thirty seconds after the inhalations begin. In the case of children, it appears after one or two respirations. The short time during which the state of insensibility lasts, is sufficient to perform the operation in a state of complete anæsthesia and of asphyxia just setting in.

From the first respirations, the patient is thrown into a sort of intoxication. The floor seems to slip away from under his feet. He seems to lose every point of support, and feels himself lifted up and rapidly carried away as though he were acending in a balloon. During this time, the pulse beats feebly and rapidly; the face swells and becomes livid; the lips assume the violet appearance characteristic of asphyxia. This whole scene produces a painful impression upon those who witness it, and they can scarcely avoid feeling apprehensions that are groundless, for the situation presents no real cause for alarm. In order that there should be real danger of asphyxia, it would be necessary to prolong the action of the protoxide for two or three minutes more. Warned by known signs that the desired point has been reached, the operator is careful not to pass it. Rather than produce a state of things which would soon become alarming, he prefers to repeat the operation and accomplish his work at two trials. The return to the normal condition is so complete and so rapid, that a second or a third trial finds the subject in the same state in which he was before the first, and presents no new inconvenience. It is by the troublesome device of producing intermittant states of anæsthesia that American surgeons, and perhaps Wells himself, have been able to employ nitrogen protoxide in operations requiring considerable time; and after, as well as before these attempts, the actual fact to be stated was that the protoxide was improper for capital operations.

A very exhaustive physiological analysis has enabled Paul Bert to discover the causes of the difficulty, and to find a remedy for it. If the diluted gas does not produce its effect, it is because the blood that traverses the lungs takes up, out of this diluted atmosphere, only a quantity of the protoxide too small to paralyze the nerve centers. Now, as the quantity of gas that enters into the circulation depends solely on its pressure, that is upon the force which it exerts upon the blood in the lungs, it follows that by compressing the diluted gas we may succeed in causing as much of it to be taken up by the blood as though we presented the pure gas under the ordinary pressure. As compression thus compensates for dilution, the anæsthetical effect will be produced in the same manner and with the same intensity.

This device then will make no change in the situation so far as the production of insensibility is concerned; but it will modify it with reference to the avoiding of asphyxia, for the gas mixed with the protoxide and serving to dilute it may be the vital and respirable gas oxygen. To permit anæsthesia while preventing asphyxia, it will suffice to present to the lungs a compressed mixture where the partial pressure of the protoxide shall be equal to the barometric pressure, and when the partial pressure of the oxygen shall be the same as in the air, that is equal to one-fifth the barometric pressure. Combining then the advantages of the two gases, the subject will breath as in pure air and will suffer anæsthesia as in the pure protoxyde. The preceding condition, as a very simple calculation shows, is equivalent to placing within the reach of the lungs of an animal a mixture of five volumes of nitrogen protoxide and one volume of oxygen reduced to a pressure one-fifth greater than the atmospheric pressure. Experiment has freely verified all these theoretical inductions, all these ingenious hypotheses. After a contact of one or two minutes with this mixture, the dog that was subjected to the trial became completely insensible. The pupil was dilated, the eye could by touched without causing winking, and a nerve of sensation could be pinched without provoking a reaction: mascular relaxation was absolute. This state could be maintained a half hour or even an hour without change. And while the higher functions of animal life were suspended, the vegetative functions persisted in their integrity. The respiration remained regular, the heart preserved its rythm, the blood its color, the animal heat its temperature. The moment the inhalations were interrupted, the return to the normal state was made with extreme rapidity. After three or four respirations in free air. that is, at the end of twenty seconds, the animal, wholly awakened, resumed his ordinary spirit and vivacity; he began to frisk about and to play with the spectators.

The experiment we have just described presented considerable importance for surgical practice. In fact it only remained to apply Bert's method to operations on man. At the beginning of the year 1879, two hospital surgeons, Labbé and Péan, made a trial of it with complete success; while Perrier and Ledentu, of Paris, and Deroubaix, of Brussels, repeated these experiments. The number of operations made with nitrogen protoxide under pressure is now more than one hundred and fifty. The merits of the process are no longer disputed. The patient finds it wholly to his advantage to be treated by this process rather than by any other. The other anæsthetics produce a profound change in the tissues by coagulating and dissolving their substance; hence the ill effects that follow the operation for a few hours, sometimes so grave that it is said the patient has suffered more from the chloroform than from the operation. As nitrogen protoxide does not form a permanent chemical combination with the tissues, and exercises only a superficial and temporary action on the organic elements, its depressing effect on the nervous system is less marked, and it permits an almost instantaneous return of sensibility, volition and intelligence. It offers another advantage: the preliminary period of excitement, which is the peril of anæsthesia by ether, and which is to be feared even with chloroform, is so abridged in the case of nitrogen protoxide as practically to disappear. Finally, and better than all, it is absolutely harmless and does not leave the most scrupulous surgeon any pretext for refusing his patients the boon of anæsthesia.

The application of this process requires special facilities. The patient must breathe a mixture of fifteen parts of oxygen and eighty-five parts of nitrogen protoxide under a pressure of about one and a third atmospheres. The reservoir in which the gas is stored has flexible sides so that compression may be applied from without; and from this the gas is conducted without loss by a mask that exactly fits the mouth and nose. On the other hand, in order that the pressure upon the inner surface of the lungs may be without danger, it is necessary that there should be an equal pressure on the surface of the body. In other words, the patient should be in the same condition that he is in normally when there is an equal atmospheric pressure within and without. Hence the necessity of placing the patient in a metalic chamber or receiver hermetically closed and capable of sustaining a pressure of one and a third atmospheres. This is the operating room. Here are the patient, the surgeon and his assistants. While the surgeon and his assistants breathe simply the compressed air of the receiver, the patient breathes the anæsthetizing mixture. The operators feel no inconvenience from remaining in the compressed air. At most they are sometimes annoyed by a disagreeable feeling of pressure upon the tympanum. The ordinary advantages of medication by compressed air atone for this inconvenience; and there is a chance that a surgeon may be cured of some slight affection of the bronchial tubes by operations intended for the good of his patients. Doubtless the fitting up of this extensive apparatus, the operating room of sheet iron, and the condensor, involves considerable expense. But such apparatus already exists in the air-cure establishments in the large cities of Europe; and it has recently been constructed in one of the hospitals of Paris, and might be in others. Finally for city practice movable receivers have been constructed, mounted on trucks, and transportable. Besides, if this apparatus for "surgery by steam" (*chirurgie a vapeur*) is more complicated than the napkin or simple handkerchief that serves for the administration of chloroform, it has also a precision and delicacy incomparably superior. It places the administration of the anæsthetic under control. It is sufficient to increase or diminish the pressure within the receiver to increase or diminish the quantity of the protoxide that enters into the circulation. With the manometer, one may thus regulate with exactness the dose that circumstances require, may maintain or prolong the state that seems favorable, a thing that is possible neither with ether nor with chloroform. It is not in medicine alone that these advantages will be of extreme value; psychological physiology has some benefits to be derived from this process. If the doctrine be true that places the abolition of pain before that of intelligence, and if the diverse cerebral faculties can be disassociated by anæsthesia, this process will afford the best means of proving the facts experimentally. Finally, we shall be able, perhaps, to reproduce with certainty the phenomena that produced such a sensation in the times of Sir Humphrey Davy, and to know the conditions of that extraordinary intoxication that gave to laughing gas its fabulous name, "gas of paradise."—A. Dastre, in *Revue des Deux Mondes*, December 15, 1880.

BOOK REVIEWS.

A MANUAL FOR THE PRACTICE OF SURGERY. By Thomas Bryant, F. R. C. S., Surgeon to, and lecturer on, Surgery at Guy's Hospital; Member corresponding de la société de chirugie de Paris. Third American, from the third revised and enlarged English edition, edited and enlarged for the use of the American student and practitioner, by John B. Roberts, A. M., M. D., lecturer on anatomy and operative surgery in the Philadelphia School of Anatomy, etc. Half Russia; pages, 1,005, with 735 illustrations. Philadelphia: Henry C. Lea's Son & Co., 1881. For sale by Sheehan & Co, Ann Arbor.

An extended notice of this valuable work is wholly unnecessary. The author has been long known to the profession, and the volume before us has reached its third edition. No more competent editor could have been found than Dr. Roberts, who has so successfully for many years given instructions in surgery in the Philadelphia School of Anatomy. The volume is gotten up in Lea's best style, which means, in the highest perfection of typographical art.

SYPHILIS AND MARRIAGE: LECTURES DELIVERED AT THE ST. LOUIS HOSPITAL, PARIS. By Alfred Fournier, Professor a la Faculté de Médicine de Paris; Médicine de l' Hospital St. Louis; Membre de l' Académie de Médicine. Translated by P. Albert Morrow, M. D., Physician to the Skin and Venereal Department, New York Dispensary, etc. Cloth; Pages, 247. Price, $2.00. New York: D. Appleton & Co., 1881.

This work treats of one of the most important questions ever presented to the profession. The high standing and large experience of the author will make it a guide to the profession. The question whether a syphilitic should ever have professional consent to marry, and if so when should it be given, are questions affecting not only the welfare and happiness of the living but of many yet unborn. The volume consists of two parts, the first discussing the subject before marriage, and the second after marriage. The author holds that syphilis constitutes only a temporary interdiction to marriage, and points out the means of deciding when this interdiction has been removed. No physician, who has anything to do with this protean and too common disease, can afford to be without these lectures.

SCRIBNER for March. Subscription price, $4.00 a year in advance. Single numbers, 35 cents. Scribner & Co., 743, Broadway, New York.

ST. NICHOLAS for March. Charles Scribner & Co., New York.

Scribner's Monthly and St. Nicholas for March are as full as usual of interesting and instructive matter. The serial of Peter the Great as Ruler and Reformer, is continued in Scribner's, and is worth the cost of the magazine.

SELECTED ABSTRACTS.

REPORT OF THE COMMITTEE FROM AMERICAN PUBLIC HEALTH ASSOCIATION ON A PLAN FOR THE PREVENTION OF THE SPREAD OF VENEREAL DISEASES. (CONCLUDED FROM PAGE 86).

BY ALBERT GIHON, M. D.;
Medical Director United States Army, Chairman.

The idle charge, endeavored to be substantiated by figures, that the inspection of public women has only induced a greater amount of disease, is not worth refuting; but the insufficiency of these inspections is evident—

Because, while discovering women who are diseased at the weekly or semi-weekly visit, it leaves them unprotected against the intermediate approaches of infected men and the unconscious contamination of their subsequent visitors;

Because minute abrasions, hidden deep in the vagina or among its rugæ, may escape detection;

Because a woman may undoubtedly be the vehicle of communicating disease from one man to others, without herself becoming infected;

Because women, who are not avowed and registered prostitutes, shop-girls, domestic servants, saloon attendants, ballet girls, choristers, kept women and the like, are exempt from examination; and chiefly,

Because it ignores the men, who are the original contaminators of the prostitute.

Furthermore, in this country at least, it is a fact that prostitutes, except those of the lowest class, have learned that it is to their own interest to keep well. There are few public houses which do not now have their regular medical attendants, who examine the inmates and treat them when diseased, and the first lesson taught the young harlot is to carefully inspect her male visitor, however gentlemanly his exterior. As the erring country girl brings forth the fruit of her illicit amour as promptly as if wedded, because ignorant of her sinning city sister's devices to avoid such a calamity, so the poor shop-girl, unaware of the sanitary value of syringes and astringent lotions, is diseased by the well-dressed admirer who has turned her head, when the professional whore would have driven him from her room. The young libertine of this day can, consequently, visit brothels with little risk. The sentimental objection that their location is thereby published and their nefarious trade advertised is of little weight beside the fact that the young man bent upon sinning might be saved from irretrievable ruin, who, with no less moral turpitude, consorts with the shop-girl whose favors are bought with cheap jewelry, or the housemaid whose chamber is conveniently near his own, and who gratifies him without charge.

While believing that the police registration of brothels and their restriction to designated quarters under sanitary surveillance are in the interest of humanity and morality, and that this no more implies the recognition and countenance of the sin of immorality than the license of rum-shops and the taxation of whisky stills presupposes the encouragement of intoxication.

Believing that the toleration and connivance, through pretended ignorance of their existence, of bawdy-houses, bed-houses, cheap lodging-houses, spurious dressmakers' rooms and cigar shops, dentists' officer, and other notorious places of resort, and the freedom of exposure permitted in public places to the most abandoned and unmistakable whores, are the most monstrous blots upon the civilization of this century, and infinitely more reprehensible than their repression and sanitary and disciplinary control by the authorities.

Your committee, nevertheless, consider this to be rather a question of public morals than of public health, and they therefore, now only recommend as in their opinion the most effectual practical means of preventing venereal diseases, the enactment by the Legislature of the several States of a law constituting it a criminal offense or misdemeanor to communicate, or to aid or abet in any way the communication, of a contagious disease such as small-pox or syphilis, and empowering and requiring health officials to establish such regulations as may be necessary for the prevention, discovery, treatment and suppression of such diseases.

Deterred by the fear of public accusation and its consequences no diseased man would thereafter venture to cohabit with any woman, whether public harlot, clandestine strumpet or his own wife.

Satisfied that the law would punish the unscrupulous wretches who have hitherto so cruelly wronged them with impunity, no woman would care to evade its application to herself, and not only the poor panderer to man's lust would have a greater incentive to preserve her personal cleanliness, but the proprietress of the bawdy-house would be equally responsible for and equally interested in the physical welfare of its inmates.

Inspections would be voluntarily solicited or cheerfully submitted to, and only those perversely negligent of sanitary observances and the degraded habitues of the lowest slums would become subjects of sanitary constraint, and with the professional burglar and black-leg, be treated as forever an object of suspicion.

It might open the way to false accusations by abandoned women, but they who object to any semblance of protection of vice can hardly find fault with this additional impediment to sensual indulgence.

Under the operation of such a law it would become the duty of every physician to exact from his syphilitic patient that voluntary isolation or seclusion which may be necessary to prevent contamination, under penalty of punishment of the former for his neglect to advise, or of the latter for his refusal to conform to the advice. While it is manifestly impracticable to require a physician to confine his syphilitic patient in a pest-house, it is, nevertheless, his legitimate office to instruct him to shun such contact with his fellow-beings as may expose them to the risk of contamination. Military and naval medical officers already have, and the surgeons of the marine hospital service and those of emigrant and passenger ships ought to have, the right to ascertain the condition and the power to restrain the liberty of diseased men and others under their charge.

For the syphilitic who marries and contaminates an innocent woman and begets a diseased child the law can scarcely frame an adequate punishment, while no code of ethics should permit a medical practitioner to screen his infamy.

The plan proposed by your committee implies the appointment of sanitary officers in every hamlet, village, town and city of the country, subordinated to and controlled by county, municipal or State boards of health, and empowered to investigate and discover every preventable cause or form of disease, syphilis included. They further recommend the establishment of special or lock hospitals for the gratuitous treatment of all venereal affections, and in the absence of such hospitals provision for their treatment without charge and without unnecessary exposure of their victims by health officials under whose cognizance they have come, since, as Dr. Beardsley has well stated, "the cost of treatment for venereal lesions has become so heavy, the prices so exorbitant, that thousands are deterred from consulting a physician through fear of being fleeced." Professor Andrews quotes the case of a private disease doctor, one of a dozen in Chicago, whose receipts in a single month amounted to two thousand dollars. The special hospitals suggested would naturally supplement and not wholly supplant the private charities, dispensaries and special wards in general hospitals for the treatment of such as might be reluctant to enter the former, which, however, it is believed, might by thoroughness and care in treatment not only attract a large proportion of unfortunate sufferers, but ultimately become the means of accomplishing the reformation of many whose misdoings had led them thither to seek relief.

The plan proposed by the committee of the American Medical association at Louisville, Kentucky, in 1877, consisting of Doctors Gross, of Philadelphia, Marion Sims, of New York, N. S. Davis, of Chicago, John Morris, of Baltimore, and J. M. Tower, of Washington, though in the same direction, is less comprehensive than that of your committee. They reported: "That in their judgment there is no possibility of stamping out syphilis until all the nations of the world are protected by proper legislative measures. Great difficulties, unfortunately, surround the execution of laws having for their end the prevention of syphilis, and it is impracticable, at the present time, in view of the ignorance and prejudices given to secure more than partial legislation looking to this purpose." We can, therefore, only hope to obtain the passage, at first, of enactments having in view the regulation of persons engaged in the military and naval service of the government, and also those ordinarily subject to the control and supervision of the police and municipal authorities of cities and large towns, though in the end we are convinced that the extension of this control and supervision to the whole civil population will be the inevitable legislation of all countries. Your committee have contemplated this wider application of the law in the plan they have concluded to submit and which it only remains for them to formulate in the following resolution:

Resolved, That the American Public Health association earnestly recommends the municipal and State boards of health to urge upon the legislative bodies of this country the enactment of a law constituting it a criminal offense to knowingly communicate, directly or indirectly, or to be instrumental in communicating a contagious disease, such as small-pox, scarlet fever or the venereal diseases, and giving to the said boards of health and to the State and municipal health officials under their control, the same power in the prevention, detection, suppression and gratuitous treatment of venereal affections, which they now possess in the cases of small-pox or other contagious diseases.

After striking out the words, "Municipal and State Board of Health," the above resolution was adopted.—*New Orleans Democrat.*

MISCELLANEOUS ITEMS.

A Bill Relative to Supplying Anatomical Material.—The following bill, introduced by Mr. Kinne, has become a law, there being only two dissenting votes:

To amend sections 1 and 2 of act number 138 of session laws of 1875, relative to subjects for dissection for the advancement of science, approved April 27, 1875, the same being section 2110 and 2111 of chapter 65 of the compiled laws of 1871, as amended.

Section 1.—*The People of the State of Michigan enact*, That sections 1 and 2 of act number 138 of the session laws of 1875, approved April 27, 1875, being sections 2110 and 2111 of chapter 65 of the compiled laws of 1871, as amended, be amended so as to read as follows:

(2110).

Section 1.—Any member of either of the following boards, and any of the following named officers or persons, to wit: The board of health of any city, village, or township, the common council of any city, the board of trustees of any village, the mayor of any city, president of any village, any board, or officer having the direction, management, charge, or control, in whole, or in part, of any prison, house of correction, workhouse, jail, or lock-up, county superintendents of the poor, keepers of poor-houses and almshouses, any physician, or other person in charge of any poor-house or almshouse, sheriff, coroners, the board of State commissioners, the board of trustees, board of control, and all officers, physicians, and persons in charge, in whole, or in part, of any institution for the deaf and dumb, blind, and insane, or other charitable institution founded or supported, in whole, or in part, at public expense, having in his or their possession or control the dead body of any person not claimed by any relative, or legal representative, as hereinafter provided, and which may be required to be buried at public expense, or the expense of any one of such public or charitable institutions, shall deliver such dead body or bodies, within thirty-six hours after death, or after he or they shall become possessed thereof, to the express or railway company at the nearest railway station, placed in a plain coffin and enclosed in a strong box, securely fastened, and plainly directed to the "Demonstrator of Anatomy, of the University of Michigan, Ann Arbor, Mich.," excepting only the dead bodies of such persons as shall have died from some infectious disease. And such boards, common councils, officers, or other persons making such shipment shall take the usual shipping receipt for such package, and shall notify the consignee of such shipment by letter, mailed on the day the package is so delivered as aforesaid; and shall also inclose in such letter a statement, giving, as nearly as can be ascertained, the name, age, residence, and cause of death of such deceased person; and the name and post-office address of the known relatives of such deceased person, whose body has been shipped as aforesaid; and also a statement of the costs and expenses which have been incurred in the procuring the coffin, box, preparation of body for shipment, and shipping the same. And, upon the receipt of such consignment, the said demonstrator of anatomy of the University of Michigan shall immediately forward to such officers, board, council, or institution, or persons making such shipment, or incurring such expenses, the amount thereof, not exceeding in any case the sum of fifteen dollars: *Provided*, Such dead body shall not be so shipped or delivered as aforesaid, if it shall be requested in good faith for interment by any relative before the same shall be shipped as aforesaid, and in case the dead body of any person, so delivered or shipped as aforesaid, be subsequently claimed or demanded of said demonstrator of anatomy, or of any other person or institution, into whose possession or under whose control it may have been placed, by virtue of the provisions of this law, by any relative or legal representative of such deceased person, for private interment, it shall be given up to such claimant even after the same shall have been interred as hereinafter provided. Such bodies shall be used only for the purposes hereinafter mentioned, and shall then, in all cases, be interred in some suitable place, kept for that purpose, and a correct record shall be kept of every such body, and all matters by which such body may be identified coming to the knowledge of the person or officer at any time in charge of such bodies, shall be faithfully recorded at length in a book to be kept for such purposes, to the end that the same may be at any time traced and recovered by the friends and relatives of such deceased person: *And provided further*, That the institution, board, council, officer, or person aforesaid in charge of any such body as aforesaid shall, immediately after the death of such person, notify, and, if possible, by telegraph, or otherwise by letter, one or more of the nearest known relatives of such deceased person of the death of such person; and in no case shall the body of any such deceased person be delivered or shipped as aforesaid until after the expiration of twenty-four hours from death; and every individual officer or party violating any of the provisions of this section shall be deemed guilty of a misdemeanor.

(2111).

SECTION 2.—The bodies so delivered, or shipped as aforesaid, shall be used for the advancement of anatomical science in this State and in the following institutions of learning only, viz.: The University of Michigan, Detroit medical college, and Michigan college of medicine. And said bodies shall be distributed to and among the same equitably, and in the order in which they are received and the number assigned to each by said demonstrator of anatomy, shall be proportional to that of its students in actual attendance. And each of said institutions shall pay quarterly to said demonstrator its ratable proportion of the expenses borne and incurred under this act: *Provided, however*, That said demonstrator of anatomy, upon the receipt of every body, under and by virtue of the provisions of this act, shall cause the same to be embalmed or put in a state of preservation, and shall not permit the same to be delivered to either of said institutions for the purpose of dissection, until the same shall have been in his possession at least ten days. And it shall be the duty of said demonstrator of anatomy, upon the receipt of every body, to immediately notify the relatives of such deceased person, if known, of the receipt of such body, either by mail or telegraph, as he may deem best. And that said body will be preserved intact, for the space of ten days, in which time such relative will be entitled to said body for the purpose of private interment, upon payment of the expenses already incurred. And if the relatives or legal representative of such deceased person shall request said body for the purpose of interment, and shall pay said expenses, said demonstrator shall deliver to such relative or legal representative, the said body, together with the said coffin and box enclosing the same. But in case said body shall not be requested by such relatives until after the same shall have been applied to the purposes intended, the remains thereof, together with the coffin and box aforesaid, shall be delivered without charge: *Provided*, That the University of Michigan, Detroit medical college and Michigan college of medicine aforesaid, and each and every other medical institution shall not receive into their possession any bodies procured in this State other than those provided for by the provisions of this act, and every individual or party violating this provision shall be deemed guilty of a misdemeanor.

THE

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ORIGINAL ARTICLES.

FATAL CASE OF SYPHILIS: AUTOPSY.

BY L. M. HALL, M. D., SOUTH FRAMINGHAM, MASSACHUSETTS,
Physician to Reformatory Prison for Women.

Bridget Curran, aged twenty-one, single, intemperate, admitted to hospital of Reformatory Prison February 13, 1880. At this time the patient was suffering from sore throat; a large mucous patch covered almost the entire extent of the soft palate, while masses of mucous patches and vegetations surrounded the anus and covered the perinæum. The general appearance of the patient denoted great debility. No reliable history could be obtained. Tonics were ordered, also hydrargyrum cum creta .06 grammes, with crude opium .015 grammes, the dose to be repeated thrice daily. The vegetations were removed with the scissors and nitric acid applied to the stumps.

The parts healed rapidly and the throat improved, but salivation threatening the hydrargyrum cum creta was abandoned March 12. The mouth became well after the use of chlorate of potassium, belladonna and quinine. March 24, van Swieten's solution was ordered, but was discontinued after a few doses as the breath again became foul and the gums discolored and painful, the saliva flowing freely. The remedies for this condition were again applied, but the belladonna was soon discontinued as it caused much dryness of the throat, also vertigo. As the mouth became better, mercury was tried in various forms, but in each case the gums responded so speedily and surely that at length its use was given up entirely. The iodide of potassium was also prescribed, but this the stomach would not tolerate in any form.

The urine was found to be slightly albuminous; pulse weak and variable; temperature normal; stomach very irritable, and retaining little food or medicine. Each day the dyscrasia became more absolute.

April 14, at 8 P. M., the patient thought herself choking; grew purple in the face, and finally seemed to lose consciousness. Recovering somewhat from this condition she seemed in great terror, saying there was a *ball in her throat* which was choking her. No cause for the sensation being discovered assafœtida was given, and her distress and excitement gradually left her.

April 15: Complained of much pain over epigastrium and across lumbar region. Nausea and vomiting almost constant.

April 18: No improvement. Stools and vomited matter much alike in appearance, consisting of a greenish, black fluid with abundant dark sediment. Pulse 90, feeble; temperature normal; eyes, bright, glassy and staring; face ghastly. Urine gave specific gravity 1010; reaction, alkaline, albumen, one-half; urea, deficient; epithelium, vesical and vaginal; (quantity for twenty-four hours not obtained); urates of ammonia in abundance.

April 18: Pulse 96; temperature in evening 100½, morning 92½. At back of chest a few moist rales were heard. Diarrhœa and vomiting still continued. Stools and vomited matter bright green in color, reaction alkaline, contained much solid matter not at all adhering, but looking like finely chopped, half cooked spinach. Tongue red at edges, dark brown and dry in center. Patient complained of severe vertical headache, also hiccoughed a great deal.

April 19: Albumen in urine, two-thirds; pulse, 110; temperature, 96; voices of attendants seemed far away, and patient did not comprehend what was said to her for some seconds, the answers being given in a tardy, bewildered manner; eyes bright and staring; mouth widely open; breathing stertorous. Later: Pulse 132, very feeble and thready; imagined she heard voices speaking strange things to her, always in right ear.

April 20: Comatose much of the time, being aroused with great difficulty only to immediately relapse into unconsciousness. Urine: Specific gravity, 1012; quantity for twenty-four hours, 135.5 cubic centimeters; albumen, three-fourths; epithelium, vesical and renal; a few broken down casts; reaction alkaline; extremities cold; pupils contracted.

April 20: Seemed a little brighter; a little wine whey resting upon stomach. Right side of face, nose and right eye itched constantly. No sensation of itching on left side of face. Still heard strange voices and sounds in right ear.

April 22: Urine still more scanty, five-sixths albumen; stools clay colored; vomited matter as before. At 5 P. M., coma so deep that all efforts to arouse her failed, until a powerful shock from a Kidder's battery was tried, and even after this, she remained awake but a few minutes.

April 25: The urine began to have a red appearance and became solid upon application of heat.

April 28: Complained of pain over right kidney when conscious. Vomited matter as above; eyes and mouth widely open while sleeping; hands and face cold. Urine drawn with catheter, 96 cubic centimeters obtained; specific gravity, 1015; color, red; reaction, alkaline from volatile alkali; solid upon heating; odor, fœtid in the extreme. Microscope showed blood corpuscles in various stages of decomposition.

The bladder was carefully washed with a weak solution of carbolic acid; a quantity of pinkish fluid of very bad odor following, and immediately afterward appeared a mass which proved to be the entire mucous lining of the bladder. At 6:30 P. M. the patient expired.

Autopsy, made hurriedly fifteen hours after death. Body, poorly nourished; rigor mortis, well established. Liver: Length, thirty-five centimeters; width, nineteen centimeters; weight, two thousand two hundred and forty-one grammes; color, brownish yellow; consistence, soft and doughy. Microscopical examination showed fatty degeneration.

Spleen soft and pulpy. Right kidney twelve centimeters in length, six centimeters in breadth; weight, one hundred and sixty-four grammes, surface smooth; tunica albuginea, opaque and easily detached; consistence, firm and fibrous; structure indistinct, hyperplasia of cellular tissue seeming to have obliterated other structures; pyramids entirely absent, also Malpighian corpuscles; color, dirty gray, with stripes of yellowish-white passing well up to capsule; pelvis present, but much contracted. Supra-renal capsule atrophied, discovered with difficulty. Left kidney, ten centimeters in length, four and one-half centimeters in width; weight, one hundred and twenty-four grammes; structural appearance nearly as in right kidney, excepting that it was more dense in structure, with pelvis entirely obliterated, the ureter opening directly against the solid substance of the kidney. Bladder congested and stripped of mucous lining.

A FRACTURE LEFT TO NATURE TO HEAL.

BY G. W. KING, M. D., KEMPTON, ILLINOIS.

Patient, age forty-five years, farmer, presented himself for examination, with the following history: While engaged in moving a building, his right limb was accidentally caught by falling timbers. When removed he was unable to stand, felt sick and weak. Examination showed the deformity accompanying

Pott's fracture of fibula. By manipulation, distinct crepitus was heard. There was considerable swelling about ankle joint. The outer side of leg badly bruised, the skin broken in several places. Put the limb up with Dupuytren's splint reducing the deformity. Ordered evaporating lotion, and anodyne to relieve pain. Twenty-four hours afterward I saw the patient. He had slept some; did not disturb the dressing. The swelling had increased. Ordered the evaporating lotion continued. Saw the case every day, nothing worthy of note occurred. Upon fourth day the swelling had not diminished and the joint becoming so severely painful from constrained position of the foot, I concluded to remove the splint and trust to antiphlogistic treatment until inflammation had subsided. Unfortunately at this time, I received a severe sprain myself, and was obliged to resign the case, but requested that another physician be called. Heard no more of the case until four weeks afterward when I was called to prescribe for another member of the family. I learned that the fracture had been left entirely alone, no form of dressing applied. Upon examination there was still some swelling, but the joint was perfectly free, and upon the whole no more deformity than is usual in cases treated in ordinary ways. Seeing no cause for interference at this stage, I concluded that the result was as good as could be hoped for. A practical thought suggests itself here. Do we not often try to do too much by treatment? There is no doubt that in many cases we trust too implicitly to apparatus after they become deranged and do not do the work expected. In this case the patient was saved the discomfort of any application or dressing, for which he may thank kind providence and not his doctor.

A CASE OF HODGKIN'S DISEASE.

SERVICE OF ALONZO B. PALMER, M. D., A. M.,

Professor of Pathology and the Practice of Medicine in the University of Michigan.

REPORTED BY J. S. BLANCHARD.

December 1, 1880, a case of Hodgkin's disease appeared before Professor Palmer's clinic. In January, 1880, F. J. C. was attacked with a hoarseness, which persisted for sometime before he visited a physician, who told him that he had bronchitis, and who treated him for a few weeks, but without relief. He then saw several physicians, but continued to grow worse. In August, while bathing, he noticed a small tumor just above the clavicle, which gradually enlarged for a month, then entirely disappeared, but soon began to grow again. The pressure of the tumor on the subclavian artery produced a blowing sound, which was mistaken for an aneurism, and he was told to go to Ann Arbor or to Chicago. The glands of the neck enlarged very rapidly, and at present his head is thrown out of position, circulation is obstructed and there is great dyspnœa. A physical examination of the chest shows dullness on percussion over the entire left side. Over right side, percussion normal. Auscultation elicits no respiratory murmur on left side, but normal on right side. Left lung displaced by mediastinal tumors. The abdominal glands are becoming affected, and the disease will probably run a rapid course. Examination of blood under the microscope shows the number of white corpuscles to be about double, and no decrease in red corpuscles. There is no pain, and but little tenderness to the touch. Bowels are quite regular, and appetite good. The comparative infrequency of this disease makes it one of special interest. Bartholow, in his recent work on practice, says, that he has seen but one case, and Professor Palmer, in forty years, has only seen nine or ten cases.

. *Synonyms.*—Malignant lymphoma; lympho-sarcoma; lymphadenoma —by Gower called lymphadenosis.

Defined by Gower as a disease of the lymphatic system, in which there is an enlargement of the lymphatic glands, having a tendency to undergo fibroid transformation, and in many cases other organs, as the liver, kidney and spleen, partake of a similar change. The blood presents a diminution of red corpuscles, and in some cases an increase in white corpuscles.

History.—Malpighi was the first to mention the disease, but Dr. Hodgkin, in 1832, described it fully, Velpeau in 1839, and in 1848 Virchow, since which time it has been known as a distinct disease.

Varieties.—A distinction has been drawn between those cases in which the glands are soft and those in which they are hard. The more rapid the growth the softer the glands, and the greater the proportion of cells, and the greater the tendency for cells to pass into the circulation. Soft forms have been called lymphatic leucocythæmia, and hard forms lympho-sarcoma, but there may be no excess of leucocytes in either form.

The disease may be distinguished according as it exists in the lymphatics only, or is associated with enlargement of the spleen. (1) Local growths only; (2) Local enlargement preponderating,—(*a*) primarily, (*b*) secondarily; (3) General uniform affection,—(*a*) secondarily general, (*b*) primarily general.

Etiology.—Causes not very well understood, and recorded cases throw little light on the subject. Heredity seems to have nothing to do with it. Six recorded cases show about seventy-five per cent. occurring in males.

Intemperance, mental depression, insufficient clothing and food, exposure to cold, constitutional syphilis and local irritation seem, in some of the recorded cases, to have exerted an influence.

Pathological anatomy.—In all cases of lymphadenosis there is enlargement of lymphatic glands; in most cases enlargement of spleen; and lymphatic growth or growths of adenoid tissue in kidneys, liver, alimentary canal, medulla of bone, and occasionally lungs, testicles and heart. Lymphatic glands of every part may become involved.

Symptoms.—Enlargement of the superficial glands is one of the first symptoms, usually those about the neck, but others may come first. Pain in the chest and cough may be present. Patient becomes anæmic and weak. Dyspnœa is usually present. In women menstruation is usually arrested. Stomatitis, due to growths in the gums, may be present. At later periods deglutition, respiration, and circulation, may be much interfered with. Enlargement of glands is usually attended with no pain. Physical examination may show the lungs and heart displaced by these growths. Functions of kidneys and liver may not be deranged until late in the disease. Urine is scanty, dark, and contains some albumen. Heart's action is seldom interfered with until some degenerative change takes place. Nervous system often shows marked symptoms: Delirium, coma, convulsions; but when death occurs no pathological condition can be discovered to account for them. Skin very pale. Increased temperature not always present, but in many cases a part of the disease, while in others it only appears during an inflammatory action on the part of some gland. Range from 100° to 103° Fahrenheit.

Complications.—Results of pressure, acute affection of kidney, pneumonia, tuberculosis, pericarditis, pleurisy, fatty degeneration of heart, jaundice, ascites and peritonitis. Certain skin affections may be present.

Course and duration.—Three stages have been proposed: (1) Local development of gland change, (2) Generalization, (3) Cachexia. Duration varies from a few months to several years. Average duration of fifty cases was nineteen months.

Termination.—Asthenia is the most common form of death. Intercurrent affections may be the cause.

Pathology.—It is generally considered a disease of the blood, but as to special pathology there are few definite ideas.

Diagnosis.—It must not be mistaken for spleno-lymphatic leucocythæmia, scrofular or cancerous growths of the lymphatic glands. Prognosis grave, and age furnishes no grounds for conclusions.

Treatment.—Excision of enlarged glands has been practiced, and in some cases where the glands have been early removed it has delayed and even arrested the progress of the disease, but more have received no benefit. Remedial agents, as arsenic, iodine, mercury, carbolic acid and iodide of potassium have been used, and in some cases with apparent benefit, but nothing of a specific nature has been found. Iron in conjunction with other tonics, fresh air, good food and cleanliness have been known to influence the disease.

For complications, special treatment may be required, and occasionally surgical interference may be necessary.

Since writing the above, postmortem examination shows the diagnosis to have been correct. The examination was made by Dr. Howell, of Dexter. The heart was crowded downwards. Left lung entirely displaced, and right encroached upon. Lung substance was healthy with exception of a cystic tumor in the lower lobe of right lung, containing about two ounces of fluid. Mucous membrane of the larynx and bronchi was intensely congested and thickened.

OPERATION FOR LACERATED PERINÆUM FOLLOWED BY GOOD RESULTS AFTER APPARENT FAILURE.

BY L. M. HALL, M. D., SOUTH FRAMINGHAM, MASSACHUSETTS.
Physician to Reformatory Prison for Women.

Harriet Dow, age twenty-four; married; perinæum lacerated during labor two years ago. Excepting a slight erosion of the cervix uteri and some leucorrhœa, the woman appeared healthy.

After properly preparing the bowels by laxatives, fluid diet and opening enemata, the patient was anæsthetized and the usual operation for laceration of perinæum performed, four deep silver sutures being employed, also three superficial sutures of silk. The woman was kept upon her side with legs tied together; the bowels were constipated by opium; urine drawn by catheter and four times daily the parts cleansed by careful syringing with a two per cent solution of carbolic acid.

January 14, two days after the operation, the wound was suppurating freely and large quantities of acrid, ill smelling secretion, of grayish color, thin, with curdy flecks and acid reaction was flowing freely from vagina and, in spite of all precautions, bathing the surfaces of the wound. The superficial stitches quickly fell away from the sloughing tissues. Temperature 102 2-5; pulse, 120; patient restless and anxious. Quinine one-half gram, was ordered, also bromide of potassium with tincture cannabis indica. On the morning of the 15th, pulse and temperature were normal. The quinine was continued and tincture iodine applied to the wound. On the 18th the deep sutures were removed, no union having taken place. The results of the operation were now believed to have ended in failure, but nothing was said to the patient about the matter, as it seemed best to try again when she should feel better. The bowels were freely moved and the syringing of vagina continued, the legs being still kept tied.

After a few days appearances began to improve, and on February 8, it was found that perfect union of the perinæum had taken place over the whole surface vivified. In a few days more this was soundly healed and the patient discharged.

NOTES FROM THE OPHTHALMIC CLINIC WITH REPORT OF SHORT CLINICAL LECTURE.

BY GEORGE E. FROTHINGHAM, M. D.,
Professor of Ophthalmology and Otology in the University of Michigan.
REPORTED BY E. N. HAWLEY,
Clinical Assistant.

To-day we are able to present to you, two very interesting and instructive cases, similar as to their causes, both being traumatic in their origin, and both demanding immediate and careful treatment.

The first one, I. M., age twenty-two, comes before you presenting the following history: About three weeks ago he was struck in the left eye by a snow-ball thrown by one of his comrades. In a few hours the eye became red and inflamed. This was soon reduced by application of some drops, he does not know what they were, and a compress of raw beef. The inflammation had nearly subsided when, ten days afterward, he was breaking kindling wood with his foot, and a small piece three or four inches long flew up and struck him in the same eye, the shock causing him to fall to the floor. In about five minutes, he found by shutting his right eye that the perception of light was rapidly disappearing in the left eye. In eight minutes he could just discern light, and up to this time the vision has not improved any. The eye immediately became inflamed and very painful. The pain has been at times so great as to prevent sleep.

Upon looking at the eye, you can all see the red and injected appearance of it. The conjunctiva covering the inner surface of the lids is very much inflamed. Upon the eyeball you see a high degree of injection; especially around the edge of the cornea in the ciliary region you will notice a pink zone. This is indicative, according to its degree and extent, of an irritable or inflamed condition of the whole or a portion of the cornea, iris, or the ciliary body. It is important as a guide and indication of treatment of such cases. You will find this well described in all of the works upon the eye, but seeing an actual case is worth more to you to enable you to recognize it readily than reading its description in all of the books. In this case cyclitis probably exists from pressure of the swollen lens matter on the ciliary body, with a tendency to extension of the inflammation forward to the iris, a very dangerous condition, requiring prompt interference. Atropine has been instilled and the pupil dilated readily to its full extent. We find near the outer edge of the cornea a cicatrix indicating that the splinter of wood perforated the cornea into the anterior chamber. We see here the iris, included in the cicatrix, drawing to one side and distorting the dilated pupil.

Upon examining the lens we find it opaque and presenting every appearance of a traumatic cataract, which seems to be swollen and bulging. No doubt, the capsule was injured by the accident, and the aqueous humor came in contact with the lens matter. In forming our judgment as to the indications for treatment in these cases, we must take into careful consideration the condition of the uninjured eye also. You can all see that it is somewhat injected, and he tells us that he has noticed some disturbance of vision in it. The sight suddenly disappearing at times and returning shortly; he has some pain in it when exposed to a bright light, and the tears run from it more than they ought. This is unquestionably a history of sympathetic disturbance, caused by the constantly irritated condition of the injured eye. This irritation of the injured eye, is without doubt, caused by the disorganized and swollen condition of its lens. His uninjured eye is in continual danger of destruction through sympathetic inflammation, and our proper course is to treat the lens of the injured eye as a foreign body, and as at his age we would expect to find the lens of considerable consistency, we should remove it. In cases of impending danger of this kind, we should not hesitate or delay in the removal of the cataract, and save the other eye if possible.

So many cases of this kind are met with, and their course watched, that their history and proper treatment are well established. In this case extraction will give him the best chance of saving sight in the injured eye, and preventing sympathetic inflammation in the other. As the patient consents, we will at once proceed to administer an anæsthetic to him, and extract the lens. After the operation he must be kept quietly in bed with light pressure bandage applied, a solution of atropine dropped into the eye two or three times per day, and careful watch kept for any development of further inflammation.

[Anæsthetic was administered and the lens which was found in a more fluid condition than was expected was removed. All soft lens matter possible was removed].

The second case that I bring before you to-day is that of W. R., age twenty-one. His history, as you will see, resembles in some respects the one just presented you. The 23rd of last December, he was assisting in the cutting off a piece of railroad iron, when a splinter flew and struck his right eye near the inner canthus. The piece penetrated the sclerotic and other coats, but did not remain in the eye. It was pulled out. The eye immediately became inflamed and somewhat painful, but not severely so. For two weeks or more after the injury he had no sight in that eye. Since then it has gradualy grown better. At present, he can just distinguish objects, moving about him, with it. He has had atropine dropped in it, and arnica applied to the lids with some other treatment, he does not know what.

Upon looking at the eye, a large cicatrix is seen toward the inner canthus, marking the spot where the piece of iron struck it. From the size of the cicatrix we must conclude that it was a large piece. The cornea has been ruptured, and the iris is prolapsed forward into the wound. The eye is also pierced in the ciliary region, and the cicatrix extends back further toward the equator of the eye. The iron cut clear through but was pulled out again.

You see a depression of the globe in this region, and the pigment of the choroid staining the cicatrix. The whole eye is congested and inflamed. The other eye has given evidence of sympathetic disturbances; pain, redness and sensitiveness to light being present or coming on whenever he attempts to work or use his eye continuously, and he has been obliged to lay by for a week or two quite often. He is in constant danger of losing his good eye, from sympathetic ophthalmia. The cicatrix and its attendant conditions are a source of constant irritation, just as the cataract was in the first case. Often the inflammatory changes, following such injuries, involve the whole contents and inner tunics of the eye-ball, causing their degeneration and atrophy to such an extent, that they are scarcely recognizable, as I have demonstrated to you before, by actual dissections. The treatment of these cases generally is to apply leeches to the temple, and use other antiphlogistic remedies. But little good is ever accomplished in this way. The cases usually go on, gradually getting worse, and both eyes are lost or the other is kept in an irritable and useless state. The sufferer will be unable to get a livelihood, and life will become almost an unbearable burden. The best course is to enucleate the eye and thus avoid all sympathetic danger to the other eye. The stump will heal in ten days or two weeks. The patient will be able to return to his work in a short time with one good eye. An artificial eye can be worn in place of this one, and most persons will be unable to detect the difference. We will therefore, advise this patient to have this eye removed at once. This is one of the perplexing cases for the young practitioner. Here is perception of light in the injured eye, and in such cases, enucleation should be performed only when it becomes absolutely necessary to save the other eye, or to relieve the patient from extreme suffering that other means fail to abate. But in this and like cases the indication is plain. Here is the extensive cicatrix involving the ciliary region. The prolonged inflammation following the injury is of such a nature that no treatment, local or constitutional, will relieve it. Such cases have been observed in sufficient numbers, to establish very certain rules of practice. The little perception of light that remains will after a while become obliterated, and the sympathetic disturbances so well marked now in the other eye, will increase and perhaps light up into inflammatory action, in an insidious form that escapes detection until too far advanced, to be arrested by the enucleation of the injured eye supplemented by other efficient treatment. This patient, besides being made an invalid by this injured eye, is in constant danger of losing the other while it is retained. Do not forget the gravity of lacerated wounds in this region. Even the clean cut wound of a cataract extraction, if encroaching too near the ciliary body, may lead to prolonged inflammation and effect the other by sympathetic inflammation. Such a wound is almost sure to do so. Delay is dangerous.

[Patient declined to have an operation at that time, but returned March 12th, and the operation was performed. March 13: Patient feeling well; has been free from pain since the operation. General health somewhat affected by an attack of of ague coming on since the operation. Stump is doing as well as could be expected.]

F. D., aged twenty-four, is the subject of our third case. This is a case differing from the others, but not less interesting. His history is as follows: Two years ago this patient caught a cold and had an inflammation in the left eye. This soon subsided leaving the sight a little impaired. About two weeks ago, patient was driving to town upon a bright sunny day. The light reflected from the snow, caused the tears to run profusely from the left eye. The next day it was swollen and inflamed. It steadily grew worse, became painful soon, with increased pain upon exposure of the well eye to light. He has kept the eye bandaged and kept at work as much as he could. He has used a compress wet in solution of cathartic salts in tea. This was too painful to be borne. He has appeared here for treatment.

This eye also appears red and injected. Upon turning the lids we find them granulated, and very red. You will notice the vascular condition of the cornea, and the characteristic pink zone around the outer edge of the cornea over the ciliary region. This, as I have said before, may indicate inflammation of the cornea, iris, ciliary body or choroid singly, or may indicate inflammation of the whole tract at once.

To determine more definitely the seat of inflammation we lift the upper lid, roll the eyeball down and make pressure far back, upon the sclerotic over the choroid with a probe or some convenient instrument. If pressure thus applied causes pain it is an evidence of choroiditis. In this case the patient says it does not. We next apply pressure in the ciliary region in the same way. This you see causes pain. To determine most positively whether there is iritis we have dropped a strong solution of sulphate of atropia into this eye. This has been repeated several times, but it responds but very little. We will conclude from this examination then, that this patient has keratitis, iritis and cyclitis, with a granular condition of the lids. In treating such cases as this we must consider the general treatment as well as the local trouble. This patient, is as you see, of full habit, florid complexion and has every apperance of a person who rather needs depleting measures than tonics. We must see that his bowels are kept freely open. The condition of the bowels often has a marked influence upon the progress of such cases. You will always find them aggravated by a constipated condition. We will order a solution of four grains of atropia to the ounce of water, dropped into the eye three times per day, watching for any unnatural dryness of the throat. He will have a mild application to his lids once a day. Either alum crayon or a five or ten grain solution of nitrate of silver. In addition to this local treatment we will prescribe seven grains of iodide of potassium, three times per day, gradually increasing to fifteen or twenty grains if he bears it well. This will have a general alterative effect and tend to prevent exudation or cause the absorption of any exudates already formed. Now heed this case and let me warn you to be careful about applying astringents and caustics in such cases. Only when treatment of the conjunctivitis is imperative should we use astringents or caustics during iritis. Be constantly on your guard. It is a mistake often made. A patient comes to the physician with conjuntivæ injected. No careful examination is made to determine whether the iris is involved and whether the conjunctival injection is dependent upon it or not. An astringent is prescribed. This is improper treatment, if the iritis is neglected, and all the symptoms will be aggravated. In this case the keratitis is evidently due to the granulated lids, and it becomes necessary to relieve this trouble if possible, without aggravating the iritis. We shall make the application with great care, thoroughly rinsing the lids after each application is made. If the application is attended with much reaction, causing any increase of pain or aggravating any of the symptoms, we shall omit them altogether until the iritis has disappeared. We shall have both eyes shaded from the light, and if pain is considerable, we shall abstract blood from the temples in addition to the other antiphlogistic measures instituted.

A CASE OF OBSTINATE GLEET.

BY W. W. MATHER, M. D., SAUGATUCK, MICHIGAN.

G. R., age twenty-three, white male, single, called on me February 5, with following history:

About August 1, 1880, he contracted gonorrhœa. Between that date and the present time he was treated by two regular physicians and one self-styled doctor, all of whom pursued the routine glass syringe and copaiba treatment, but all of no avail except to discourage the patient.

When he called on me, he had a slight but persistent urethral discharge, but did not otherwise complain.

Thinking the disease must have a deep seat I passed a metallic sound, number eight, finding no stricture but some tenderness in the membranous portion; he also complained of soreness on external pressure in that region.

Having become satisfied that the inflammation was there situated and that previous injections had failed to reach it, I determined on the following treatment. With small rubber tube, I made connection between the nozzle of Davison's syringe and a small (number two) catheter.

Having introduced the instrument so that the eye was at posterior part of membranous portion I slowly injected the following:

℞. Plumbi acet.................................
Zinci acet................................... āā gr. jss.
Aq.. ʒviij. M.

As the instrument used was small it allowed a free escape of fluid thus thoroughly cleansing and slightly astringing the membranous and spongy portion of the urethra. The injection was directed to be used twice a day. After the third sitting he complained less of tenderness, and diminution of discharge was noticable. At the end of one week discharge had entirely ceased, but as some tenderness remained, he was directed to continue injections every other day for another week when it had passed off and I dismissed him. Having recently seen him he said the "cure was complete" and he "felt like a new man." Feeling confident that in the obstinate forms of gleet dependent on a deep chronic inflammation it is necessary to thoroughly cleanse the part I have been more explicit in description of apparatus as it is so simple that any physician could procure it at little trouble or expense. Since writing the above I have had occasion to use it on another case in which it has proven equally efficacious.

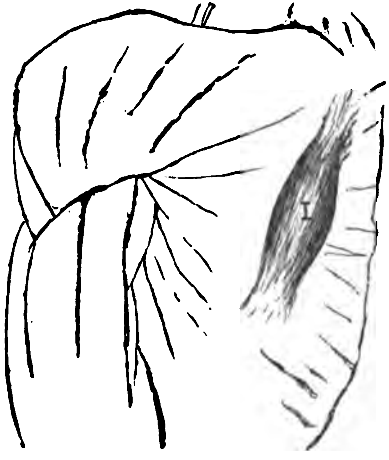
CASE OF ABNORMAL DEVELOPMENT OF MUSCLES OF THE PECTORAL REGION.

BY RICARD W. CORWIN, M. D., CHICAGO, ILLINOIS,
House-Surgeon to Saint Luke's Hospital.

Mr. W. C., October, 1880, while engaged in loading freight-cars, was caught between the side of a box-car and a heavy loaded dray which was being backed into position to be unloaded. The patient's back came in contact with the iron support on which the car door rests; an iron about three inches in width, half an inch in thickness and several feet in length. While the rear of the dray, which was protected by an iron band enclosing the two inch plank which formed the floor of the cart, struck him in the hypochondriac and epigastric regions.

The man was brought to the hospital about fifteen minutes after the occurrence of the accident. At this time he was unconscious, pulseless at the wrist, pupils somewhat dilated and breathing with difficulty. Respiration became weaker and weaker, and thirty-three minutes from the time of the injury the patient quietly expired. He was one of those smooth-faced Bohemians, who look just as young at forty as at twenty years of age, but for reasons afterward known, I believe him to have been a young man. He had a magnificent physique and certainly was a very muscular person.

Postmortem.—Externally no marks of violence except slight abrasions of the skin over the eighth and ninth dorsal vertebræ, which were, judging from the outlines, produced by the iron door support above mentioned. Extensive hemorrhage had taken place in the abdominal cavity. The abdominal organs were healthy and uninjured except the right and left lobes of the liver which were almost entirely divided antero-posteriorly to a line drawn between the seventh and eighth ribs. Neither of these ribs or any other were fractured, but all were very flexible. There is of course, no question about the cause of the injury, but it appears a little peculiar that a dray driven back against a person with sufficient force to almost completely sever the liver, that there should not be left some marks of violence upon the surrounding tissues, at least, upon the surface of the skin, where, as in this case, not a trace of contusion could be detected. No other injury was found; but there was discovered a marked abnormal muscular developement in the right pectoral region. The accompanying cut represents the outlines of the muscles of the right side of the chest and of the right shoulder and arm. At I, is seen a muscle about seven inches long, two and one-fourth inches wide, at its widest portion, and about one-third of an inch in thickness. Its origin consisting of aponeurotic fibres, part of which pierced the pectoralis major and arose from the lower border of the sternal end of the second rib. Its fibres passed downward and outward to the right, diverging and converging to form an aponeurosis, the fibres of which were lost in the pectoralis major near its lower anterior border.



This muscular abnormality was wholly asymmetrical. Not a trace of anything of this nature could be found on the left side.

CASES FROM PRACTICE.

BY W. T. DODGE, M. D., MARLETTE, MICHIGAN.

Case I—Oxaluria.—J. B., aged thirty-four, married, occupation moulder, consulted me January 22, 1881.

For several years he has been suffering with vauge digestive troubles: Considerable pain in the region of the stomach; bowels always constipated; has but little appetite, but eats because he knows he cannot work without. He has pain in the back constantly, with headache.

He has consulted many physicians and been under treatment constantly. One eminent physician told him that he had "liver complaint and neuralgia of the walls of the stomach." But all the medicine that he has taken has had but little effect on his trouble. I obtained a specimen of his urine and made an examination with the following result: Specific gravity, 1034; reaction, acid; and with the microscope discovered a great many minute crystals of oxalate of lime. I prescribed acidi nitro-muriatici six drops, three times a day, and Palmer's laxative pills, one every night. Also ordered him to drink rain water.

January 29: Reports that he feels better than he has before for a year, and I found on examination that the oxalates had almost entirely disappeared from the urine.

February 6: Patient reports that the pain has disappeared from the back, and to use his own words, "I feel like a new man." On careful examination I was unable to find any oxalates in the urine.

Case II—Irritable Heart.—J. H., aged forty, married, occupation photographer, consulted me January 20, 1881. He has considerable discomfort after eating; pain over abdomen; dizziness; pulse very slow and irregular. He has been complaining for several years and has taken medicine constantly. He has tried nearly the whole list of patent medicines and consulted many physicians. He uses tobacco quite extensively. On examination I found the heart sounds normal, though weak and irregular; two beats coming in quick succession, followed by an interval of several seconds, this again followed by two or three beats.

I concluded that a portion of his trouble was due to the tobacco and advised him to discontinue its use. He promised to do so and to thoroughly test the matter; I gave him no medicine whatever. I saw him again in two weeks and found his heart beating regularly. He said he had used no tobacco during the two weeks, and felt much better.

March 1: Has been troubled with indigestion, but notwithstanding this his heart has continued to perform its office regularly, and his weight has increased.

Case III.—Mrs. W., aged twenty-six, a farmer's wife, residing six miles from this place. On January 21, I was called to see her and obtained the following history: The day after New Year's she was taken with pain in the right ear, followed soon after by swelling and discharge of matter. Since then the pus has been running constantly, attended by severe pain and tenderness all around the ear. I prescribed three grains of cinchonidia sulphate three times a day, and one quarter grain of morphiæ sulphate, as required to relieve pain. I also ordered a linseed meal poultice applied several times a day, and the following injection used three times a day:

℞. Zinci sulp.,
Morphiæ sulp.................................. āā grs. j.
Aquæ destill.................................. ℥j.
M. Sig.

I gave instructions to inform me of her condition in a few days, but heard nothing more of her until February 3, when I was in the neighborhood and was called in. I found an enlargement behind the ear and obtained fluctuation. I made a free incision and evacuated a large quantity of pus. I gave a wash of two per cent. solution of carbolic acid, to be used three times a day. Hearing was much impaired, she only being able to hear the tick of a watch when it was pressed against the ear.

February 25: Saw the patient and found the abscess entirely healed, scarcely a scar remaining to mark the site of the opening. The hearing is much improved, she being able to hear the tick of a watch at six inches.

A CASE OF INJURY TO THE SKULL.

BY C. H. McKAIN, M. D., Fort Elliott, Texas,
Acting Assistant Surgeon United States Army.

Was called December 4, 1880, to see A. C., who had received a blow above left eye from an iron coffee-mill weighing six pounds. His attendants informed me that he had been unconscious for forty-eight hours. His pulse beat 60 per minute, regular and full, temperature not taken, pupils normal, breathing regular and deep. There was no relaxation of the sphincters, but, on the contrary, the bladder was distended.

Upon probing the wound I found an opening in the external table of the skull one-half inch in length by one-fourth inch in width. The internal table was depressed. I removed a few small fragments of what appeared to be comminuted portions of external table, but at no point could apply the elevator, or even a small probe, with sufficient force to restore the depressed bone to its proper position. It appeared that a small projection on the mill had perforated the external table, but depressed the internal, and to an extent much greater than the area of the outer wound. Being satisfied that it would be necessary to trephine, I relieved the bladder, and prescribed the following:

℞. Hg. chlor. mite.................................. gr. x.
Podophyllin .... gr. ⅛.

To be repeated if necessary to secure a thorough movement of the bowels, and prepared to return next morning.

On my arrival the following day the attendants assured me that the patient had been partially conscious at times since the effect of the cathartic. He was quite too restless to endure the operation without an anæsthetic. I therefore placed him under chloroform, and, enlarging the external wound, applied the trephine over the edge of fracture of external table. Through the opening thus made I was able to elevate the depressed bone easily. This, however, loosened a few fragments so that I feared they would not unite with those remaining, which made it necessary to remove them entirely. While doing this I was in great fear of injuring seriously the duramater, which adheres closely to the internal table.

Two hours later, when patient had recovered from the effects of the anæsthetic, he was able to speak, articulating distinctly, although hesitating after each word. Directed a cold water dressing, a laxative, beef tea and milk. If he became restless I also directed the following to be repeated once in four or six hours:

℞. Potas. brom.. gr. xv.
Aquæ .... ℥ss.

December 10: Found patient as follows: Pulse 70; temperature not taken, tongue slightly coated, appetite good. He was perfectly rational, slept well without the bromide, bowels loose, and urine passed without trouble.

December 14: Patient still doing well, being about most of the time. Had no pain, appetite and digestion good.

Did not see patient again until January 27, at which date he had resumed his occupation, and has continued to perform his duties to the present date, March 1. I was deterred from making more frequent visits to him on account of the distance he lived from the post.

SEVERE INJURY, WITH RECOVERY.

BY F. J. GRONER, M. D., BIG RAPIDS, MICHIGAN.
Attending Physician to Mercy Hospital.

Hiram Taylor, age twenty-eight was struck by a falling stub, which made a musculo-integumentary wound extending from one inch below the umbilicus, and one inch to the left of the median line to a point three inches above the crest of the ilium then backward and downward to within three inches of the spine of the lumbar vertebræ, making an eliptical cut twelve and one-half inches long. A piece of the dorsum of the ilium about two inches square was broken out. The wound gaped fully four inches. The pants and shirt were cut as with a knife; but strange to state the peritoneal coat was not ruptured. The wound was stitched up and strapped by Dr. Hendryx, and the patient sent twenty-two miles to Mercy hospital of this city. Patient was injured December 9, 1880. Dr. Hendryx and I saw the patient on the 10th and put him on large doses of quinine, morphine, and a little tincture of iron. I saw the patient the 11th; temperature 101¾°, pulse 95: 13th; temperature 103¾°, pulse 120; patient suffering a great deal, suppuration very profuse, and some very unfavorable symptoms. I ordered an extra ten grain dose of quinine, making thirty-five grains for the day. Symptoms better the next day. December 15; temperature 101¼°, pulse 100. December 16; temperature 100½°, pulse 88. December 17; temperature 102°, pulse 108; patient perspiring profusely; an acid bath and ten grains extra of quinine ordered, after which temperature and pulse gradually became normal. A lumbar abscess formed which I opened by a free incision three inches long, from which a quart of pus was immediately discharged; it was then dressed with carbolized oakum. The stitches were removed from the wound, and it was strapped. The gap was fully three inches; the points of the broken ilium protruded through the integument, the piece broken off slid down over the dorsum, granulations sprang up and covered the loose protruding bone. The process of healing was so rapid that on the 12th of January, 1881, the patient left the hospital, and was seen by me at the hotel until January 31, when he started for his home in the southern part of the State with a mere trace of the wound uncovered with skin.

CASE OF EMPHYSEMA.

SERVICE OF ALONZO B. PALMER, M. D., A. M.,
Professor of Principles and Practice of Medicine in the University of Michigan.
REPORTED BY P. E. NAGLE, M. D.

Harry F. P., age six, Schuylerville, New York, came to Professor Palmer's clinic, January 1, 1881. The child was accompanied by his mother, who gave the following history of the case: About the first of October, 1880, the child was seized by a severe chill which lasted from two to four hours; this condition was followed by high fever, restlessness and some cough. There was now an intermission of the symptoms for about four days, during which time the patient was comparatively easy. At the end of the fourth day, the chill came on again and lasted for four days. After this the child's health appeared to improve gradually, but he was still troubled with a hacking cough and a slight fever, especially at night. About the 20th of December 1880, the child raised a considerable quantity of purulent matter and has continued to do so at intervals, since that time. The child's parents are both living and quite healthy.

Present Condition.—The child was of a fair size for his age, but he was pale, weak, emaciated and very fretful. Temperature 100° Fahrenheit, tongue slightly coated, appetite poor, bowels regular. On the 23 of December, the child weighed forty-five pounds. The hacking, dry cough still remained.

On inspection, the left side of the chest was found to be motionless and slightly bulging, and the child breathed almost entirely with right lung. On percussion, there was found a small area of tympanitic resonance over the apex of left lung, while over the remaining portion of the lung there was dullness amounting almost to flatness. Auscultation revealed exaggerated respiratory murmur over apex of left lung, while the normal respiratory murmur was entirely absent over the rest of it; there were also slight friction murmurs heard over left lung. The respiratory murmur of right lung was slightly exaggerated.

Diagnosis.—Emphysema with a fistulous opening into one of the bronchi. After a careful consideration of the case thoracentesis was recommended, and the operation was performed by Dr. Maclean, at Dr. Palmer's request, on the 3rd of January. A small trocar was introduced into the thoracic cavity, in the left infra-axillary region, and a large quantity of pus was slowly evacuated. The canula was left in the wound and a rubber tube, the free end of which rested in a solution of carbolic acid, was fastened to it. Drainage was thus maintained for a few days. Small doses of quinine were also given with a view to limiting the suppuration and strengthening the patient.

January 4: The patient's temperature was 98.5° Fahrenheit in the morning; tongue slightly coated but moist. The patient was quite comfortable during the night, but somewhat restless. Physical examination revealed the fact that the left lung had expanded considerably since the last examination. Evening temperature 99.75.

January 10: The examination showed that the lung had expanded posteriorly to the lower angle of the scapula. Anteriorly it was expanded down to the nipple. Mensuration showed left side begining to contract.

January 15: The examination showed that the lung was expanded to nearly its normal extent. Inspection revealed a decided flattening of the left side. Temperature normal.

January 29: Temperature normal. Tonic doses of quinine continued and in addition one grain of iodide of potassium, three times a day. The left lung had reached its normal limits.

Perhaps nothing could convey a better idea of the beneficial effect of the timely operation than the rapidity with which the child gained flesh after its performance. On the 23rd of December, he weighed forty-five pounds, on the 17th of January, fourteen days after the operation, forty-six and a half pounds, on the 24th of January, forty-eight and a half pounds.

MALIGNANT TUMOR OF THE NECK INVOLVING THE LARGE BLOOD-VESSELS: REMOVAL: DEATH.

BY DONALD MACLEAN, M. D.,
Professor of Surgery in the University of Michigan.

C. M., age fifty-four, farmer from Monroe, Michigan, admitted to the University hospital October 20, 1880, on account of a large and very painful tumor, which filled the anterior triangle of the neck on the right side. According to the patient's statement the tumor commenced a year ago in the form of a small growth near the angle of the jaw. Its growth had always been rapid and especially so during the last two months, during which time it had more than doubled its size. It had always been painful, latterly excessively so, entirely depriving the patient of rest. According to his own and his friends evidence the treatment prior to his coming to Ann Arbor had consisted mainly of *electricity* applied by doctors at Monroe who call themselves homœopaths.

Patient and all his friends were certain that the electricity if it had any effect at all had aggravated his sufferings. *It certainly had done no good.* On examination the tumor was found to be very hard and very firmly packed into the neck behind the lower jaw and under the sterno-cleido-mastoid muscle. On grasping it with the hand it was still slightly movable, from which I ventured to hope that its removal with the knife might still be practicable, and as this afforded the poor man the only possible chance for escaping a lingering and loathsome death, I acceded to his urgent appeal, having previously in presence of the medical class stated plainly to him the great danger and uncertainty of the enterprise.

With the able assistance of my colleague, Dr. Frothingham, my brother, Dr. A. M. Maclean, and my regular corps of hospital assistants, I proceeded to operate; the patient being completely under the influence of chloroform. The first incision extended from just below and behind the lobe of the ear down to within one and a half inches of the clavicle. As this did not give sufficient freedom, a second incision was made from the centre of the first and at right angle to it, towards the middle line of the neck. The tumor was not encapsulated and being closely related to all the surrounding textures, a very careful dissection was necessary to free it. Numerous small but active arteries were divided and secured by ligatures. The dissection was carried round the lower end of the growth with the intention of separating it from its deep relations from below upwards. I had hoped to find the carotid vessels, etc., still protected from the morbid growth by their sheath, but in this I was disappointed. The common carotid artery and the internal jugular vein were found so inextricably involved in the morbid mass that I at once found myself in the anxious position of having to elect one or other of two portentous alternatives, viz., to abandon the operation or to complete it at the expense of these important structures. With my colleague's approval, I chose the latter, and having carefully ligatured the large vessels (with two ligatures each), I proceeded to complete the removal of the tumor by dissecting upwards taking the large vessels with it. The sympathetic nerve was seen lying beneath the tumor, but not involved in it, while the pneumogastric was easily separated from the mass. The latter was held safely out of the way of the knife by Dr. Frothingham while the attention of the class was especially called to it. The hypoglossal nerve was so involved in the growth that a portion of it had to be excised. At the upper end of the space all the vessels were again ligatured. Most of them before they were divided, and the rest immediately afterwards, so that on the whole the loss of blood was comparatively trivial, the patient's breathing, pulse and complexion continued good throughout. The tumor was entirely removed and the wound was at once closed with carbolized silk sutures. The further history of the case is recorded in the hospital case book as follows:

October 21, 9 A. M.: Pulse 120, temperature 99½; passed the night well, no pain, except when he tries to swallow or speak.

October 22, 9 A. M.: Pulse 130, temperature 104; feels very weak, still unable to swallow. Nutritive and stimulant enemata have been used freely all day.

Evening: Sinking rapidly; died at 7 P. M.

Commentary.—The obviously malignant character of this growth naturally caused grave fears as to its connections with the important structures underneath it. These fears could only be settled by operation and the fact that the tumor was still movable furnished in my opinion sufficient grounds for overruling those apprehensions and giving the patient the benefit of the doubt, and affording him the only chance of escape from early and painful death. The immediate cause of his death was undoubtedly *shock*, and it was not considered necessary to ask for the privilege of a *postmortem* examination. It seems necessary to state here that I have now in my possession documentary evidence to prove that the family and friends of this unfortunate patient while deeply mourning his melancholy death, are perfectly satisfied with and extremely grateful for all the efforts made for his relief by myself and others in the hospital. I have also documentary evidence to prove that his former homœopathic attendants not satisfied with having ignorantly, dishonestly and cruelly frittered away the precious time when an operation could have been safely and effectually performed, did not hesitate to persist in their cold blooded and malevolent practices after the patient's death.

When the poor man's remains were carried to his former home by his sorrowing relatives, the persons referred to proceeded there, and without any intimation to me or to any of my professional friends in the neighborhood prevailed upon the family to permit them to make a *postmortem* examination, and having done so they very appropriately and consistently completed their nefarious course of action by trying to impress the bereaved family that the fatal issue of the case had been produced by the application of a ligature to some nerve, vein, or artery by mistake. A ridiculous falsehood and slander, in the promulgating of which the authors of it have been industriously aided and abetted by the Homœopathic College of this University. The animus of their conduct, however, was too patent and their whole relations to the case too discreditable for the family and friends to be further imposed upon by them, and it is safe to say that their *postmortem* examination was a miserable farce scientifically and in every other respect. It rather seems as if the *postmortem* was made upon themselves, as men dead alike to every instinct of *science, of humanity, and of common decency.*

A microscopical examination of the structure of this tumor completely corroborates the diagnosis of malignancy. It consisted for the most part of large, round, and spindle-shaped cells with numerous nuclei.

A CASE OF LEAD POISONING FROM THE USE OF A FACE POWDER.

SERVICE OF ALONZO B. PALMER, M. D., A. M.,
Professor of the Principles and Practice of Medicine in the University of Michigan.
REPORTED BY P. E. NAGLE, M. D.

Mrs. Ida P., age twenty-one, entered the University hospital on the 11th of January, 1880. Three years previously she was taken with severe pains across the small of her back. These pains were not accompanied by fever and lasted for two weeks and were so severe as to totally incapacitate her for all work and even cause convulsions. These pains have continued up to the present time, but lately they have been confined more to her arms and hands. Four weeks before entering the hospital the index finger of her right hand became paralyzed and entirely useless.

She has had various forms of treatment, and came to the hospital with the intention of being treated for supposed uterine disease. She was examined by Professor Dunster who could find no diseased condition of the uterus and she was turned over to Professor Palmer as a case of lead poisoning.

Present Condition.—The patient was pale and weak. Her hands were flexed at the wrists, and when she attempted to use them they trembled very violently. She had lost control over them to such an extent that she could not feed or dress herself. Bowels constipated, tongue slightly coated, appetite poor, pulse 90, temperature normal. There was a blue line on the gums which were somewhat retracted.

Diagnosis.—Professor Palmer concurred in the diagnosis previously made, of chronic lead poisoning.

After careful inquiry nothing could be found which could account for the introduction of lead into the system, until it was ascertained that the patient had been in the habit of using a face powder called "flake white," ever since she was nine years old. The powder was carefully analyzed and found to be composed entirely of carbonate of lead. This the patient had been accustomed to apply to her cheeks, after moistening them with water.

Treatment.—Owing to the long continuance of the disease Professor Palmer stated that a rapid recovery was scarcely to be hoped for and that such cases must be treated for a long time and continuously before any good results can be expected.

The patient was informed of the nature of the powder she had been using and cautioned not to use it any more. Iodide of potassium, in eight grain doses three times a day, sulphur baths and electricity were prescribed, and at the end of three weeks the patient's symptoms were so much relieved that she could dress and feed herself. The patient left the hospital at the end of the fifth week, all her symptoms being greatly improved.

It may not be unimportant to note that notwithstanding the continued improvement of the patient, not the slightest trace of lead could be found in the urine at any time during the continuance of the treatment.

EDITORIAL BRIEFS.

A CORRECTION.—In the February number, page 65, in the article by Dr. von Ruck, please read "where there is *no* danger," etc., instead of "where there is danger," etc.

WHAT IS FAME?—Recently a professor in a medical school in France, referred to Cincinnati, *Indiana*. A Polish journal from Warsaw, comes to us addressed to THE PHYSICIAN AND SURGEON, *Michigan City*, U. S. A. A writer in one of our exchanges refers to Dr. Michael Foster as the great physiologist of *London*. Professor Van Buren, in his recent work on "Diseases of the Rectum," refers to the valuable statistics, on the injection method of treating internal hemorrhoids, collected by Professor E. Andrews, of *Saint Louis*.

New Remedies.—The enterprising house of Parke, Davis & Co., of Detroit, are introducing some new remedies which promise to be of much value to the profession. We desire to call attention to the following:

(1) *Coto* has already been referred to in this journal as of great value in diarrhœa. This has been the verdict of the profession in England, where the drug has been extensively used. Indeed, coto can hardly be said to be a new remedy now; for its claims seem well established. A writer in the *Virginia Medical Monthly* formulates the results of his use of coto as follows:

(*a*) Coto and its preparations belong to the most active anti-diarrhœal remedies.

(*b*) Its use in children has the invaluable advantage that a *narcotic effect is entirely excluded.*

(*c*) Coto is a valuable remedy against hyperhydrosis, though its action is evanescent.

(*d*) Coto is well borne, and acts as a stomachic in some cases.

(*e*) In mild and moderately severe typhus fever, the disease is influenced so far that the bowel affection is controlled, the course and duration of the disease checked and shortened, and the character of the affection moderated.

(2) *Quebracho bark* (*aspidosperma quebracho*) contains an alkaloid, *aspidospermin*, which has the formula $C_{22} H_{30} N_2 O_2$, and properties similar to those of quinine. In South America it is used as a remedy for fevers. Penzoldt in *Berliner klin. Wochenschft.* refers to this new remedy as follows: "We possess in quebracho bark a remedy which, without prejudicial consequences, alleviates for hours, or entirely removes, different forms of asthma or difficult breathing in various diseases of the lungs and the circulatory system. Its therapeutical effect is manifested in frequency of depth of respiration, in cyanosis, and primarily in subjective depression." We have used the remedy in one case of labored breathing from severe cold, with some bronchitis, with gratifying results.

(3) *Jamaica dogwood* has already established its claims as a narcotic and anti-spasmodic. In some hospital reports in this journal, a year ago, one of the editors reported the pleasant and certain narcotic effects of this drug.

(4) *Duboisia* is a mydriatic as powerful and less irritating than atropia. In another part of this issue will be found a fuller discussion of its physiological and toxic action.

(5) *Rhus aromatica* has been recommended in hæmaturia, menorrhagia, etc. We have no personal experience with this drug.

(6) *Corn silk* (*stigmata of maize*) has been recommended in the French journals as a diuretic. The action is supposed to be due to mazienic acid. We now have this drug under physiological experimentation and will report the results when obtained.

(7) *Urechites suberecta* has been studied in regard to its physiological action by Bowrey and Ott. The experiments of the latter show, (*a*) that the drug causes death mainly by arrest of the heart, (*b*) it does not paralyze the motor nerves, (*c*) it does not paralyze the pneumogastric nerve, (*d*) it depresses cardiac frequency, increases then decreases the arterial tension. The comparision between the properties and action of urechitin and aconite is shown in the following:

URECHITIN.	ACONITIA
It contains no nitrogen.	It contains nitrogen.
Powerful toxicant.	Powerful toxicant.
It kills mainly through cardiac arrest.	It kills mainly through respiratory apparatus.
It does not paralyze the motor nerves.	It does not paralyze motor nerves.
It does not paralyze the sensory nerves, but does the spinal sensory ganglia.	It paralyzes first the sensory nerve ends, then the nerve trunk, and finally the spinal sensory ganglia.
It reduces the pulse by an action on the heart, probably on its muscular structure.	It reduces the pulse by an action on the intra-cardiac ganglia.
It increases arterial tension and then depresses it; the rise is due either to an action on the peripheral vaso-motor system or to a cramp of the intestinal canal.	It increases and then decreases arterial tension by an action on the cardiac ganglia.
The pneumogastrics are not paralyzed.	The pneumogastrics are paralyzed by small doses.
It causes no delirium cordis.	It causes delirium cordis.
It is a salivator.	It is a salivator.
It increases the secretion of the skin.	It increases the secretion of the skin.

BELLEVUE MEDICAL COLLEGE.—About one year ago this old and honorable institution advanced its requirements for admission greatly. At the time, this step seemed a bold, indeed, a reckless one for a college which depends upon the tuition of its students for its financial support. Recently we have been informed that the experience of the session of 1880–81 has convinced the faculty that it would be unwise to continue the advanced requirements, and that hereafter the attendance upon the third year's course of lectures will be optional, not obligatory, and that no examination for admission will be required. From this failure on the part of the profession to respond to the advance in medical education attempted by Bellevue, we may learn a useful lesson. Reform in medical education, like that in every other department of knowledge, must be gradual. And here it may be remarked that the greatest injury being done to-day to reform in medical education is wrought by those institutions which advertise the highest requirements and admit every student that applies. In other words, those colleges that sail under false colors. There are such institutions in this land. Some are homœopathic, others are not. The first advance made by the Department of Medicine and Surgery of the University of Michigan was to abolish the requirements which had been advertised for years, but which had never been adhered to. This was done some eight years ago. Since that time the requirements for admission have been low, but they have been honestly adhered to. The requirements have been gradually advanced; they are still low, but they are *actual requirements*. Of the eighteen applicants who have failed of admission during the present session, some have matriculated in schools which advertise equal, and some more advanced requirements than those of the Department of Medicine and Surgery. We have illustrated this in our last issue in an examination paper which we published. We may have occasion to speak on this subject again.

MEDICAL NEWS.

Professor C. G. Smythe gave an interesting address on the "Germ Theory" before the graduating class of Central University, Indianapolis, Indiana.

A Michigan Quack gave the following prescription:

"℞. Powder of egg shells........................ 20 grs.

"To be taken *annually* every two hours until her bowels were *removed*."

Members of the classes of '78, University of Michigan, and '79, Bellevue College, will be pained to learn that F. B. Golley is "puffed" in the *Milwaukee Chronicle* as a cancer doctor—a quack of the worst description.

Dr. E. B. Stevens, whose formula, for the treatment of too frequent seminal emissions, was referred to in our January number, writes us: "I have in a few cases (2-3) tried chloral, with apparent good effects, for the control of the emissions.

"℞. Chloral......... .... ʒvij.
Water and syrup.......................... ad f ℥iv.
"M. Sig. A teaspoonful after each meal.

"The vigor of the system to be kept up with tonics at the same time. I saw this in one of our exchanges, but have forgotten which."

Before the graduating class of the Fort Wayne Medical

College, Professor W. H. Myers pointed out some ways in which the true physician may and does bless mankind. Professor Myers' subject was "Physic *versus* Theology." The physician must protest against improper dressing; for the minister seldom dares to oppose the evils of fashion. Dr. Myers shows that he appreciates the great work of his profession, and we hope that his students may be worthy the master.

CORRESPONDENCE.

MINERAL IN ANIMAL FOOD.

EDITOR OF THE PHYSICIAN AND SURGEON: In THE PHYSICIAN AND SURGEON of August, 1879, I ask and you answer some questions in regard to the assimilation of mineral substances by animals. My first question is: Does the animal assimilate aliment directly from the mineral or must all mineral substances become a part of the vegetable before they can be appropriated by the animal as food? The perusal of your answer shows that I did not make myself clearly understood. Allow me to use the term "*inorganic mineral*" to designate such mineral substances as have never formed a part of plant or animal; and "*organic minerals*," those that have formed parts of plants or animals. There is no room for discussion about mineral substances being necessary to animal existence. As shown by the experiments you refer to of dogs and other animals dying when fed on food void of mineral substances, you say: "The following inorganic substances are essential constituents of the food of animals: earthy and alkaline phosphates, earthy (calcium and magnesium), iron and silica." Of course your position is correct as to the substances being necessary to all animals as food. But in all the foods in which these substances are found (whether animal or vegetable) they have been organized. The lime in the wheat may be the same so far as chemical tests show, as the lime in the soil that produced the wheat; but that mysterious force that we call vitality has changed the conditions and relations of the atoms of lime—it has vitalized—organized them, a change too subtle for chemical tests, but perhaps none the less real. You say, "If one or more of these (mineral) substances is not sufficiently supplied in the plant upon which the animal feeds, then the animal may take this part of its food directly from the mineral world."

The proof of this assertion is just what we want; and we write not to controvert, but to get information. There is no question but what man and other animals you name must have chloride of sodium to satisfy a demand of their nature—chloride of sodium is necessary to their existence. But what does it do for the animal? It exists free in all the tissues, apparently unchanged by the animal, and in the same condition it is eliminated by all the excretories. It seems to serve a special purpose as a promoter of endosmosic and exosmosic currents. But does the animal system break up the molecules of chloride of sodium and supply a demand of its nature with the new compounds, or does it demand Na Cl and is this demand satisfied when Na Cl is received into the system and unchanged performs certain offices and without change is excreted? Or if any is changed is it that Na Cl that the animal received in food from some other animal or plant, or that which was taken from the mineral? Your answer to my third question is not entirely satisfactory to me. (3) Does the animal ever appropriate lime or iron from the mineral, or must these be vitalized by plants before the animal can assimilate them?

I am aware the proof you give to your affirmative answer to this question, many have regarded as you do, as establishing beyond doubt that the animal does appropriate the solutions of iron and metamorphose it into vital tissue—the hæmoglobin of the red corpuscle. There is no doubt but iron taken as you state does increase the red corpuscles and the hæmoglobin in them. If iron were the only substance that did this, your proof would be reliable, but it ceases to be any proof whatever, when the administration of other substances containing no iron does the same thing. Another fact casts still more doubt on your proof. The same solution of iron that sometimes increases the red corpuscles, given in some other pathological conditions or in health, will cause an immediate decrease in them.

The effect of iron and other substances in these cases seems to be purely catalytic. We have seen cases where the osseous system seemed to be starving for lime, when excessive quantities were being taken daily in the inorganic form in water, and there seemed to be no appropriation of this while there seemed to be immediate appropriation of the lime when vegetable food such as Graham bread was taken. The incubating chicken no doubt appropriates lime from the egg-shell, but is the egg-shell inorganic lime? We think not. It was certainly organized by the system of the hen.

The cases that seem to us to indicate strongest that the animal does appropriate directly from the inorganic mineral are those of the molusca. Here a very small animal forms a shell, many times its own weight, of carbonate of lime, and there seems to be no vegetable supply within the reach of the molusca, and if there were they are not vegetarians. But nature may in their case have made a special provision for these low organisms to secrete the house they live in from the water around them. Respectfully yours, W. H. ROBINSON.

SUISUN, CALIFORNIA.

As Dr. Robinson states, it is well established that inorganic foods are essential to the health and life of the animal. The question now is, Do substances taken directly from the inorganic world ever become a part of the tissue of the animal, or do they simply have a catalytic effect? We think that there is at least one substance taken directly from the inorganic world, and becoming a part of the tissue of the animal, about which there can be no question. Oxygen from the atmosphere is taken through the lungs into the blood, and immediately becomes a part of the red corpuscle. The corpuscles constitute an important tissue of the animal, and it assimilates oxygen directly from the atmosphere.

Dr. Robinson is undoubtedly right in believing that *organized* mineral substances are more readily assimilated by animals than those directly from the inorganic world; but we have seen the administration of the ordinary phosphates followed by beneficial results in cases of rachitis and osteomalacia. This is an interesting as well as an important subject, and we shall be glad to have a further discussion of it in this journal. In our next number we will have a translation of a valuable article, which has just appeared in Germany, on "Inorganic Foods."

TRANSLATIONS.

Translations from Russian Journals for THE PHYSICIAN AND SURGEON.
BY RALPH D'ARY, M. D., ROMEO, MICHIGAN.

INJECTIONS INTO THE PARENCHYMA OF THE SPLEEN.

Since Professor Mosler first injected Fowler's solution and weak solutions of carbolic acid into the parenchyma of the spleen, other physicians have paid more attention to the local surgical treatment of the parenchymatous organs in general. Professor Mosler had already advanced the opinion that these injections were not without danger in cases of excessive enlargement of the spleen, which thereby becomes too friable. It is therefore necessary, previous to any attempts at injection, to render the spleen more solid, by means of quinine, strychnine, or the application of ice bags for several hours.

Besides Fowler's solution and carbolic acid solutions, preparations of ergot have also been used by injection. Dr. Hammond, for instance, produced a rapid and permanent diminution of the spleen by injecting 3.7 grams E. F. Secalis cornuti (bromican). This quantity was divided, in one case, into six separate injections; in another, into four without any evil consequences. In a third case he did not use the extract, but sclerotic acid, which by Dragendorf has been determined to be the active principle of secale cornustum. But this last injection was followed by death in six hours, which proves that these injections are not free from danger.

Simple punctures of the parenchyma have also been tried, with the object of producing hemorrhage in it, as it was thought that by this means atrophy and consolidation of the organ might be induced, by obliterating the vessels, per emboliam (These operations had been successfully tried on dogs).

The punctures were made frequently, with solid or hollow needles, the largest of which had a thickness of three millimetres (?). The object was the cure of leucocythæmia, as it was thought their quantity would be lessened by lessening their hypertrophied source—the spleen. But the results did not prove satisfactory, even where electro-puncture had been employed, and autopsy of Dr. Hammond's fatal case did not reveal any traces of the deep punctures made by him.

It would have been highly important to have demonstrated the cause of the fatal issue of the above case, but unfortunately the postmortem gave no positive results. One thing only was accepted as beyond doubt—that death could not have taken place in consequence of poisoning, as the quantity of sclerotic acid injected was too minute. Kussmaul and Mosler believe that death resulted from excessive enlargement of the blood-vessels (friability of the parenchyma) of the spleen, and the bad quality of the blood, which was leuchæmic and puriform. They couclude therefore that injections into the parenchyma of the spleen are dangerous *per se*, without regard to the substance injected—(even if it were simply water), when the spleen is excessively enlarged and friable, when leuchæmia has already produced its specific cachexy, or even in the absence of true leuchæmia, where pseudo-leuchæmia exists, as a consequence of the degeneration of the spleen. Owing to this belief Mosler proposes as above stated to therapeutically consolidate the organ, before administering the injections—he considers the latter dangerous also to patients affected with a hemorrhagic diathesis. Fowler's solution he believes to be the best remedy for injection.

For practical purposes we will give, in brief, two of Mosler's cases.

(1) Case of enlarged spleen, from malarial fever and syphilis. The patient, a Hungarian, had suffered with the fever twice before, in 1879 and 1880, and was now affected with cutaneous syphilis. The enlargement of the spleen was attributed to both causes, and the mercurial treatment (calomel) had no influence on the spleen. It extended seventeen centimetres along the linea auxillaris, and its lower part reached the median line. It was hard to the touch. The liver and urine were normal. The blood did not contain an excess of white corpuscles. Faradaisation of the spleen had no effect. For eight days previous to the operation, the patient was given injections

per rectum of amorphous muriate of quinia, and immediately before the injection, an ice bag was applied to the region of the spleen, during four hours. The injections consisted first of one-half syringeful (of Pravaz), then of a whole syringeful of undiluted Fowler's solution. The needle of the syringe had been made longer than usual. There was no particular pain. Sixteen injections were made, with the result of considerably diminishing the size of the spleen.

(2) Another patient, age fifty-nine, had enlargement of the spleen from malarial causes only. It reached the linea alba and crest of the ilium. The patient suffered from various dyspeptic symptoms, in consequence of the mechanical obstruction caused by the great bulk of the organ, which had become freely moveable and therefore still more increased his distress. Seven injections of a whole syringeful (of Pravaz) were made, the patient at one time neglecting the application of ice after the injection. At that time he suffered more pain, probably owing to his neglect. The spleen was considerably diminished and became less mobile.

Opinions concerning the utility of arsenic in malarial fever are very much divided, but M.'s experiments prove that it positively has the power of diminishing an enlarged spleen, and therefore, in that respect, has the virtues of quinine [and ergot.—*Translator*]. M. suggests the injection of quinine simultaneously with its administration *per orem*. He never saw any toxic effects from his injections of arsenic. Yet the quantity introduced into the system by M.'s method is comparatively large. Hence he concludes, that a greater amount can be borne than is usually supposed, if only the dose is increased very gradually.

[In malarial fever the spleen frequently forms close adhesions with the anterior abdominal walls, and on that account, injections in those diseases should be less dangerous, than when the spleen lies free in the abdominal cavity.—*Editor.*]—Condensed from *Sovr. Med.*

SALICYLATE OF SODA IN APHTHA.

Dr. K. Kusenef writes to the *Med. Obozr.*: I take the liberty to call your attention to the following very successful application of salicylate of soda. In one of my patients, a four-year-old boy, severely suffering from dysentery, there appeared, in the third week of the disease, aphtha, completely covering the buccal cavity, the pharynx, and even larynx, so that the little one could breathe or talk only with difficulty. He was also hoarse. The usual applications of borax were made during two days without the least benefit, and moreover each thorough application was followed by vomiting, which threatened to finally exhaust the debilitated patient. Considering the parasitic nature of the disease, I resolved to try salicylate of soda, and was not disappointed.

After the use of the salt as a gargle, for one day (sodii salicyl. one drachm, aqua dest. six ounces) the thrush and hoarseness disappeared completely and deglutition and speech became normal. Since this case I have frequently prescribed this remedy to be applied by means of a swab to the mouths of nursing children, in the Smolensk District Hospital for Children (one drachm to one ounce) and always with the same prompt and certain effect. I therefore feel justified in recommending this remedy. It presents the following advantages over other remedies used in these cases: (1) Its effect is unusually certain and prompt; (2) it has a sweetish taste which is not disagreeable to the children; (3) it is harmless, if swallowed; (4) if the disease should extend to the œsophagus, where swabbing is impossible, it may be prescribed for internal use.

ANGINA PECTORIS.

In August of last year, Professor Potain, of Paris, called attention to the fact that the disease commonly known as angina pectoris, arises from three distinct causes:

(1) It may be the consequence of obstruction of the coronary arteries of the heart, and in that case it is invariably fatal. Of this variety he had observed thirty-six cases. This obstruction is caused not only by atheromatous deposits, but also by contraction and other causes lessening the caliber of these vessels. The attacks in this variety of the disease, are caused only by difficulties of digestion, or when the patient exercises during the process of digestion. Besides the constriction of the chest, there is pain in one or both upper extremities.

(2) The second variety does not in any way depend upon disease of the coronary arteries, but is a true neurosis. This disease, which is met more frequently in private than in hospital practice, generally attacks nervous and rheumatic patients and is much less dangerous. It is brought on by cold and dampness. For instance—let a young woman, all in a perspiration from dancing, put her head out of the window for a while. The same night she may have a severe attack of constriction of the chest, with pain in her left upper extremity. In a few hours the attack ceases, but returns again on following nights. This may continue for a week, then the attacks return with less severity and regularity, and finally disappear altogether. This disease somewhat resembles pseudo-croup. After the attack has passed off, the patients breathe with perfect freedom, which is not the case in the first variety. This neurosis is never fatal. It attacks young and nervous patients, while the organic variety is observed in middle-aged, old, and gouty persons.

(3) The third variety generally depends on some chronic heart difficulty, mostly enlargement. It may complicate chronic lung disease, such as emphysema or sclerosis; or gastric troubles, or any combinations of these ailments. After dinner, especially if the patient has exercised after it, he begins to feel oppressed, and is full of fear, but yet without difficulty of breathing. He experiences an aching under the sternum, or in the heart, with a feeling of fullness, and of weakness extending to the upper extremities. Although there do not exist sufficient statistical data, yet it would seem that this latter variety is more common than the other two. It is not dangerous to life.

Treatment, in cases of the first variety, is unfortunately quite impotent, the more so as the paroxysm generally is rapidly fatal. If it should be at all prolonged, injections of morphia may be useful. In the intervals, Potain recommends to give potassium iodide, as it is a good remedy for arteritis. Arsenic and the bromides may serve to influence the nerves.

Nervous angina calls for counter-irritants, such as sinapisms and blisters, also for asafœtida, camphor, ether, etc.; in the intervals sulphur baths (either liquid or gaseous), topical remedies, ferruginous preparations, fresh air, etc.

The third variety requires rest and treatment of the constitutional disease.—*Sovr. Med.*

CHRYSOPHANIC ACID IN PSORIASIS.

Translated from Dr. E. Klink's article in *Sovremen Medicina.*

(IN ABSTRACT).

This new remedy is without a doubt the best one in this disease. All the remedies hitherto employed, such as sapo viridis, pix (in all their various modes of application), Wilkinson's ointment, sulphur baths, etc., yield to chrysophanic acid. It is true, it will not prevent relapses, but, as we shall see, it considerably lessens the time of treatment and also renders it easier. Herein lie its great advantages. Kaposi, in his latest work, "Pathologie und Therapie der Hautkrankheiten," 1879, recommends its exhibition in two degrees of strength, as a *stronger* ointment, consisting of ten parts of the acid and forty of vaseline, and a *milder* one, of five parts to forty. Instead of vaseline the ung. emolliens may be used. I myself prefer the milder ointment.

Before using this remedy a preparatory treatment should be followed. Firstly, the scales and crusts of the affected surfaces should be removed, in order that the ointment may take greater effect. This may be done by simply tearing them off, if the eruption is but slight; otherwise by the use of green soap. When the eruption does not occupy too large a surface, the green soap may be thoroughly rubbed on, all over the diseased

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surface at once, twice a day. After applying the soap for two or three days, the scales will begin to soften, and may then be washed off with warm water, leaving the surface ready for the application of the ointment. When a considerable surface is diseased, we proceed in a different manner: In order not to irritate too great an extent of the skin at once, the ointment is not applied to the whole extent of the diseased area, but the body is divided into several regions, which are treated successively. Thus we may begin with one or both upper extremities, then continue with the lower extremities, the trunk, etc., according to the extent of surface involved. The ointment is conveniently applied with a hard tooth brush, and should be limited as much as possible to the diseased surface, in order to avoid irritation of the adjacent healthy skin. The brushing should be continued on the red spots which carried the crusts, until there appear minute red dots, (as on an abraded surface) indicating a commencing extravasation of blood. This should be done twice a day, without washing off the ointment previously applied. After a few days, according to the condition of the patient, the applications may be made only every two or three days, in the meanwhile covering the anointed surfaces with linen or flannel. Finally the patient takes a warm bath and carefully washes all the ointment off the anointed part.

If, after we have thus gone over all the affected parts in succession, the eruption still persists, we must begin again in the same order, or treat a larger region at once, according to the degree of improvement. Generally it takes from four to five weeks to effect a cure.

As a consequence of this treatment the surface treated, and that immediately surrounding it, first becomes hyperæmic and swells a little. In some cases an inflammatory condition similar to erysipelas sets in, caused probably by a greater degree of irritability of the patient's skin, or by too strong an ointment. After several applications the eruption becomes paler, beginning at the circumference of the spots, and at the same time also the infiltration of the skin diminishes. The skin assumes a dark purple color, shading into bronze. This color extends also over the surrounding healthy skin. The linen is stained in the same way, hence I advised to cover the parts.

As the eruption frequently appears on the face and head, I would say that on the head it is best to use only a *very* mild ointment, as an irritation of the skin here may have much more serious consequences, than elsewhere. On the face the ointment should not be used at all, in order not to stain the skin, especially as the eruption here is generally but slight. The color, after a few baths, disappears, however. If used on the face, the appearance of irritation should be a sign to stop the application of the ointment.

I have used this treatment in five cases, the eruption varying in size, the largest spots being about the size of a silver dollar. Some of the cases were recent, others of several years' standing. They all yielded to, at most, ten applications. Internally I gave arsenic, but not in the usual (Fowler's) solution, since some patients are very intolerant of it. I prescribed the sol. arsenicalis Pearsonii (one grain arseniate of soda to the ounce of distilled water) in the same doses as Fowler's solution, and I think Pearson's solution especially valuable where arsenic has to be employed for some length of time, as it is better borne.

Chrysophanic acid may be used also in eczema marginatum, herpes tonsurans, and pityriasis versicolor.

OVARIOTOMY IN HYSTERIA.

Readers of the July number, 1880, of THE PHYSICIAN AND SURGEON will remember the description of pretended ovariotomy performed by Dr. Israel for hysteria. This report had caused considerable sensation in German medical and lay literature. Lately, however, the patient consulted Professor Hegar, and confessed to him that the vomiting had not ceased, and that she had simply cheated the Doctor, as he had cheated her. Truly: When Greek meets Greek, then comes the tug of war! [Both doctor and patient are "children of Israel"]. Professor Hegar found no evidence of hysteria, but diagnosed the case as one of peri-oophoritis and perimetritis, which of course had not been cured by the pretended operation.—*D'Ary.*

SURGICAL TREATMENT OF ABSCESS OF THE LIVER.

Dr. Felix Rochard has recently communicated to the medical academy of Paris the details of the operative treatment of hepatic abscess, as it has been practiced for some time by Charles Little, at Shanghai. It consists, essentially, in a free section of the abscess, with observance of Lister's antiseptic precautions. As soon as the location of the abscess is clearly determined, Little makes an explorative puncture, with aspiration, in order to remove all doubts as to the existence of pus. The exploring needle serving as a guide to the knife, the wall of the abscess is freely cut open, its cavity is thoroughly emptied of its contents, and washed out with carbolated water. Then a drainage tube is inserted and Lister's bandage applied. The surgeon takes no pains to ascertain whether there exists adhesion between the wall of the abscess and the layers of the abdominal wall covering it, or not. Neither does he produce this condition by artificial means. Three patients, in whom the abscesses had formed after an attack of dysentery, were treated in this manner, and recovered in from two to three weeks. Little ascribes this success to Lister's bandage; for all of his previous operations for hepatic abscess, without Lister's antiseptic precautions, had ended fatally, although he used various methods of operating. Three cases only may not be sufficient to convince surgeons of the safety of Little's method, but they, nevertheless present another feature worth noticing, viz.: The rapid recovery of the patients; for they were allowed to leave their beds on the second and third day after the operation, and completely recovered in the time stated above.—*Med. Vestnik.*

AURICULO-TEMPORAL NEUROTOMY.

Dr. Perkowski reports the following case: A laborer, age sixty-seven, had suffered five years from severe neuralgia in the left half of the inferior maxilla (*neuralgie épileptiforme*, of the French). The pain regularly attacked him when he ate, talked, or pressed the gums; narcotics gave no relief; removal of the majority of the teeth was equally useless. Finally Dr. P. resolved to cut the inferior dental nerve from within the buccal cavity, but happening to notice a statement in Richet's "Surgical Anatomy," that section of the auriculo-temporal nerve, in some as yet unaccounted for manner had cured some neuralgic affections of the face, he determined to try this operation. He told the patient to open his mouth and by means of a small vertical incision he severed the branches of that nerve between the lower maxillary condyle and the cartilage of the external ear. The pain disappeared. In this operation it is not the trunk of the nerve that is cut, but its small horizontal branches, supplying the external ear.—*Medycyna.*

Translations from Scandinavian Journals for The Physician and Surgeon.
BY J. S. JOHNSON, M. D., ORFORDVILLE, WISCONSIN.

POISONING BY DUBOISIA.

REPORTED BY DR. H. J. BERNER, CHRISTIANIA, NORWAY,
Physician to the Insane Asylum.

The extract of duboisia myoparoides, first brought to Europe from central Australia, has been the subject of considerable experimentation, the most important of which have been made by Dr. Sydney Ringer, of London. From the extract the alkaloid was first obtained by Gerrard in England, and about the same time by Petit in France. The result of these experiments has been that duboisia has established a reputation of a powerful mydriatic, closely allied to atropia, possessing all its good qualities, but more powerful and less irritating to the conjunctiva.

[Duboisia is a remedy that bids fair to become valuable in ophthalmology, and as liability to poisoning must not be overlooked, and cases of well marked toxic effects have not often been reported, a detailed account of such an instance may be interesting to many of our readers.—*Translator*].

The toxic symptoms below recounted, occurred in my own person, after the dropping of a one per cent solution of the sulphate of duboisia into the right eye, and were observed by myself and my assistant. I had used the same solution previously, and after every application observed symptoms of poisoning, but not nearly so severe. What should cause their intensity in this instance I cannot explain.

About ten minutes after the instillation of a single drop, the symptoms appeared, all the affected organs being simultaneously attacked. All objects appeared ill defined and foggy as well as very small and distant. Both pupils dilated ad maximum and accommodation was suspended. Before both eyes phatoposiæ in the form of large planes of fire from which I shrunk terrified. There was vertigo on changing from a reclining to an upright position, objects appeared to have a swinging motion and the body swayed back and forth. A sensation of cold was felt in the temples but no real headache. I felt an anxious restlessness that constantly kept me in active motion. Mind and memory became disturbed and for two hours I existed in a semi-unconscious, befogged, dreamy condition, from which I could be aroused for only a short time. The countenance appeared pale and anxious, nose cold and eyes staring. At first there was some roaring in the ears, afterward, deafness and voices seemed very distant. The mucous membranes of the nose, mouth and fauces were excessively dry, swallowing was very painful and almost impossible, and drink had to be taken every few minutes, not to satisfy thirst, but a peculiar scratching or smarting sensation in the throat. Speech was impeded and thick so that many words were left out, partly from impaired ability to think and partly from paralysis of the tongue. The voice was hoarse, almost whispering, with a hollow somewhat nasal twang. On attempting to sing, the tones were decidedly false, and a saltish, frothy mucus secreted in small quantity from the throat. The soft palate was paralysed so that the breathing in the recumbent position became snoring. Ten minutes after the first symptom, vomiting occurred which was repeated in ten minutes more, and was, contrary to former experience, quite difficult. Pulse, full and strong, 88 (ordinarily 76–80). Respiration superficial and hurried; pectoral muscles so paretic, that attempts at full inflation resulted in a very imperfect expansion of the thorax. Arms and limbs paretic. Arms seemed heavy, trembling and unsteady in their movements. Finger-tips pale and cold at first, afterwards red and tingling. Sensation diminished. The gait staggering like an inebriat's, and the knees weak and trembling. Also occasionally spasmodic contraction of certain groups of muscles, suddenly extending the leg, the foot, etc. There was also some sensation of pricking in the feet. I could not stand still with closed eyes. The toes, like the fingers, at first cold afterwards warm.

During the first hour and a half, one and one-half quarts of very clear watery urine was eliminated, which, however, was unfortunately not examined. This condition lasted from three and a half to four hours; the first one and a half hours being passed in a very restless state, the last two in somnolence. The paralysis of the accommodation lasted for two days so as to prohibit the use of the eyes, in some degree for four or five days. The dilation of the pupil of the non-medicated eye lasted five to six days. The next day there was some clammy perspiration, a depressed and irritable condition, bodily and mental.

Besides this case, Dr. Carl, of Frankfort am Main. (*Klin. Mon.-Blat. f. Augenheilk;* Band XVII, 1873), has reported a case of poisoning in a child that is very similar to this. In both, the similarity between this drug and atropia is apparent.

Professor Ladenburg, of Kiel, has lately shown (*Bericht. d. Deutch. Chem. Gesell.*, February 23, 1880) that the chemical reactions of duboisia and hyoscyamin are the same, and consequently concluded that they are identical. His view is sustained by this case in the similarity of the physiological effects.

Theoretically the above related phenomena may be explained by assuming the affection of the entire central portions of the nervous system with disturbance of the intellect, and also of the peripheral sensory, motor and vaso-motor nerves, with spasm and paralyses in their respective territories.

So far as present experience reaches, the following effects of duboisia may be said to be established: Headache, drowsiness, dilatation of the pupils, paralysis of accommodation, dryness of the throat, impeded articulation, increase of the pulse rate, paresis with spasms in the extremities and lessening of the secretion of the skin. From my experience in the present case, the following effects may also be mentioned, namely: deafness, paralysis of the vocal chords, the secretion from the throat, increased elimination of urine, and paleness and coolness of the surface combined with a sense of cold.

Translations from German Journals for THE PHYSICIAN AND SURGEON.

BY P. E. NAGLE, M. D.,
Assistant to the Professor of Pathology and Practice of Medicine, and Assistant in Qualitative Chemistry in the University of Michigan.

EFFECT OF ALCOHOL ON TISSUE METAMORPHOSIS.

Quite recently, L. Reiss has performed two series of experiments the object of which was to determine the influence of the methodical administration of alcohol to healthy men, on the urine excreted. These experiments show a more striking decrease in the amount of the principal constituents of the urine, especially in the nitrogenous constituents, than any previous ones. Two convalescents, who were to all intents healthy, were selected and a uniform diet administered; every precaution was taken that all surrounding influences should be the same each day. A measured quantity of absolute alcohol was taken and diluted with water until it was about the strength of common forty per cent. alcohol; the daily amount was given in divided doses during the day. To one of the men eighty cubic centimeters of alcohol were given during the first period, and one hundred and sixty cubic centimeters during the second period; to the other, one hundred and sixty cubic centimeters during the first period, and this quantity was doubled during the second period. The constituents of the urine were determined according to the best volumetric methods by Drs. Paul and Wachenfeld. The chemical constituents of the fæces were not ascertained, but during the second period the fæces were weighed each day.

The pulse and temperature were in both cases carefully noted every day. In the first period the alcohol was used for six days; in the second, for twelve days. In the first case, with the smaller doses of alcohol, the urine was slightly increased in quantity, the specific gravity was lowered and the principal constituents were decreased as follows:

Urea, daily average decrease about twenty-two per cent.
Chlorides, daily average decrease about twenty-one per cent.
Phosphates, daily average decrease about thirty-four per cent.
Sulphates, daily average decrease about twenty-two per cent.
Uric acid, daily average decrease about eleven per cent.

The condition of the persons experimented on was, with the exception of a two days' diarrhœa, during which the alcohol was continued, entirely normal, neither the pulse nor temperature showing any variation from the normal state. In the second period, when the alcohol was given in larger doses and for a longer time, the quantity of the urine was increased more than in the first period. The solid constituents were decreased as follows:

Urea, daily average decrease about fifteen per cent.
Uric acid, daily average decrease about sixteen per cent.
Chlorides, daily average decrease about thirteen per cent.
Phosphates, daily average decrease about eleven per cent.
Sulphates, daily average decrease about two per cent.

During the administration of the alcohol the body weight was 880 grammes *pro die* higher than either before or after. The temperature and pulse were normal, as in the first period; nor was there any exciting or depressing effect noted even during the administration of the largest doses.

Since the persons experimented on were carefully watched as regards their diet and conduct, both of which were as uniform as they could possibly be made, the change in the excretion of urine could be accounted for only by the action of the alcohol, this action resulting from a change of tissue metamorphoses, caused by the oxidation of the alcohol in the body. When it is remembered that at the beginning of the experiments neither of the persons experimented on was in normal equilibrium, so to speak, and that in consequence of the change in the diet, which was previously richer in nitrogen, there was a tendency to greater body expenditure, and that in both cases diuresis was increased and with it the tendency to the excretion of urea, the decrease in the amount of urea excreted is, indeed, quite remarkable.

The increase in body weight during the second period must have been due to the decreased metamorphosis of albuminoids. It should also be remembered that the amounts of alcohol given were very large, much larger than the doses usually given for dietetic or medical purposes.

This series of experiments prove that (at least in these two cases it did) the use of large doses of alcohol retards tissue metamorphosis, that alcohol is therefore a food, "*nahrungsmittel*," and that its favorable influence on the strength of the diseased and healthy organism does not depend alone on its power as a stimulant, but also on its nutritive properties.—*Schmidt's Jahrbücher*, Band CLXXXVIII, Nummer XI.

ATROPINE IN SPERMATORRHŒA.

Dr. J. Nowatschek relates the history of a case of spermatorrhœa which came on after an attack of typhus fever. Emissions took place without any erection, in fact the fluid constantly but slowly oozed away from the urethra. The diagnosis was placed beyond doubt, by repeated examinations of the fluid with the microscope, and the discovery of large numbers of spermatozoa therein. The patient's constitution was badly shattered. The doctor prescribed nourishing diet, iron, quinine, bathing the genitals in cold water and cold baths. This treatment had the effect of rendering the flow of seminal fluid less constant, but on micturition or defecation the emissions recurred. Lupulin, camphor and bromide of potassium, were now tried but without avail. Atropine was then resorted to, and after using this five days, the emissions had entirely ceased, and could not be brought on even by straining and pressing. The emissions did not return and the patient got well.

The same remedy was used with equal success in another case. The patient, a private teacher, had practiced Onanism, and when he came to Dr. Nowatschek was suffering from almost constant emissions. The treatment in this case was the hypodermic injection of atropine (0.1 gram to one hundred grams of water) in the perineum. Two injections made on successive days completely relieved the patient.—*Schmidt's Jahrbücher.*

BOOK REVIEWS.

THE HUMAN BODY: AN ACCOUNT OF ITS STRUCTURE AND ACTIVITIES AND THE CONDITIONS OF ITS HEALTHY WORKING.

By H. Newell Martin, D. Sc., M. A., M. B., Professor of Biology in the Johns Hopkins University; Fellow of University College, London; late Fellow of Christ's College, Cambridge. New York: Henry Holt & Co., 1881. Cloth; pages 621, with an appendix of 31 pages. Price, $2.75.

The majority of text-books for high schools and colleges on the subjects of anatomy and physiology are wholly untrustworthy. They are, as a rule, so far behind the times that many of their statements are incorrect. This is true to such an extent that the writer of this has observed that medical students who have had no physiology in the high school and college are better fitted for the thorough study of these branches than those who have had no such elementary instruction. Again, in the points wherein these elementary works are correct, the majority of them are so superficial as to be almost valueless. Indeed, the average maker of scientific text-books for high schools and colleges must have a poor opinion of the intellect of those for whom the book is written, if we are to judge from the very superficial way in which the subjects are discussed. These facts have caused us frequently to express the wish that some good elementary work on physiology should be presented to the public. This has been accomplished in the volume now before us. It is fully abreast of the times, and gives the student a correct idea of the extent, interest and value of this all-important science. We would recommend this work not only for the general student, but would advise preceptors of medical students to have their students read this work thoroughly as the foundation of their course in physiology. This, followed by Foster's work and the latter followed by Hermann's Handbuch, now being issued, is the course of reading which we would recommend for the student who desires a knowledge of the science as it is.

LECTURES UPON DISEASES OF THE RECTUM AND THE SURGERY OF THE LOWER BOWEL, DELIVERED AT THE BELLEVUE HOSPITAL MEDICAL COLLEGE.

By W. H. Van Buren, M. D., LL. D., Professor of the Principles and Practice of Surgery in the Bellevue Hospital Medical College, etc., etc. New York: D. Appleton & Co., 1881. Cloth; pages 412. Price, $3.00.

This is a second edition, which has been largely rewritten and much enlarged. The value of the work will probably be best illustrated by giving the special subjects of each lecture: (1) Pruritus ani, erythema, herpes, chronic eczema, eczema marginatum, oxyuris vermicularis or thread-worm, hemorrhoids, varieties, causes, pathological anatomy, external hemorrhoids;

(2) Internal hemorrhoids; (3) Prolapsus ani; (4) Polypus and benign tumors; (5) Abscesses; (6) Fistula in ano; (7) Fissure, or irritable ulcer of the anus; (8) Ulcer of the rectum; (9) Benign stricture of the rectum; (10) Cancer of the rectum; (11) Congenital malformation, fecal impaction, foreign bodies in the lower bowel, atony of the rectum, diagnosis and exploration, neuralgia of anus or rectum, hygiene of the lower bowel.

Each of these subjects is discussed in a practical way. Especial attention is given to treatment, both surgical and medical. No space is given to theories, and the book is just what is needed as a guide in these diseases, which are often troublesome to the practitioner, and the majority of which yield readily to proper measures.

A TREATISE ON THE PRINCIPLES AND PRACTICE OF MEDICINE, DESIGNED FOR THE USE OF PRACTITIONERS AND STUDENTS OF MEDICINE. By Austin Flint, M.D., Professor of the Principles and Practice of Medicine and of Clinical Medicine in the Bellevue Hospital Medical College; Fellow of the New York Academy of Medicine, etc., etc. Fifth edition, revised and largely rewritten. Philadelphia: H. C. Lea's Son & Co., 1880. Half Russia; pages, 1150. Price, $7.00.

Probably no other writer has had so much to do with the formation of the American physician's ideas of pathology and treatment as Professor Flint. For a quarter of a century he has been before the profession as an author and as a teacher, and the fact that the medical profession of America now compares favorably with that of any of the European nations is largely due to the writings of Professor Flint. His works and new editions have always been fully up with the latest advances in the science. He does not seek to make the assertions in one edition correspond with those of a previous edition, when the latter have been disproved or replaced by newly discovered facts.

As to the edition before us, it is only necessary to compare it with previous editions. As the author states in the preface, this edition is essentially a new work. Dr. William Welch has assisted in the revision and has contributed the first seven chapters, embracing the general pathology of the solid tissue and the blood. Other portions of the treatise have undergone radical changes. A new section, devoted to diseases of the hæmatopoietic system, has been introduced, and the classification of diseases of the nervous system has been made upon an anatomical, and not upon a symptomatic basis.

SCRIBNER'S for April. Subscription price $4.00 a year in advance. Single numbers 35 cents. Scribner & Co., New York.

The April number is the last number of Volume XXI of this valuable publication. A glance at the table of contents of this number will show that, like good wine, this magazine improves with age. The efforts of the publishers to improve the art of engraving in wood should meet with the hearty approval of all thoughtful people, and, judging from the illustrations in this number, their efforts have not been in vain. The principal articles of this number are: "Marine Forms as Applicable to Decoration," "Father Hyacinthe," "Running the Rapids of the Upper Hudson," "A Georgia Plantation," "A Freak of Fate," "New York Attics and House Tops," and "Wood Engraving," and the *Scribner* Prizes.

ST. NICHOLAS for April. Scribner & Co., New York.

This, the Easter number, is illustrated especially for the season. The Easter card is a beautiful drawing. Master Moono is pleasantly described in his journey from Dan to Beersheba, and the illustrations are by a "born artist." "Cross Patch" is told in verse and illustrated, teaching a useful lesson as well as furnishing amusement. Mrs. Oliphant begins the story of "Mary, Queen of Scots." We might mention other interesting articles and illustrations, but discrimination is unjust where the whole number is filled with joy and instruction for the little folk.

TRANSACTIONS OF THE AMERICAN MEDICAL ASSOCIATION. Volume XXXI, 1880. Cloth; pages 1153.

The papers of interest presented at the last meeting of the Association have already been culled by the journals. The volume before us shows that the labor of the secretary and other officers has been performed with much thoroughness and good taste. The next meeting of the Association will be held in Richmond, Virginia, beginning on the first Tuesday in May next. The *Virginia Medical Monthly* will issue a daily during the session.

SELECTED ABSTRACTS.

Abstracts from American Journals for THE PHYSICIAN AND SURGEON.

BY A. J. ROSENBERRY, HOUGHTON, MICHIGAN.

CATARRHAL CONDITIONS OF THE STOMACH.

Secondary Catarrh.—In obstructive cardiac, hepatic or pulmonic disease, secondary catarrh of the gastro-intestinal mucous membrane is rarely absent, the lesion being due to blocking up of the portal circulation leading to distention of the gastro-intestinal capillaries.

Chronic gastric hyperæmia always produces thickening and increased firmness of the mucous membrane, with a change in color to slate-gray or even to brown, the surface being covered with a grayish, tough adherent mucus. If, however, the congestion be recent and intense, the mucous membrane presents various shades of vivid redness, with occasional patches of ecchymosis, it is œdematous and granular in appearance and is covered with tenacious mucus. The treatment of secondary catarrh resolves itself into that of the causative lesion, whether of the heart, lungs or liver.

Primary Catarrh.—The acute form of this affection may be produced by exposure to cold and wet, but the most frequent cause is intemperance in eating and drinking, experiments having demonstrated that irritating food or an excess of alcoholic stimulant will produce gastric congestion and diminish the flow of gastric juice.

The catarrh produced by irritating food, or by food of bad quality, depends less upon the material itself than upon the irritating products of decomposition taking place when it remains in the stomach only partially digested. On the contrary, the catarrh resulting from the ingestion of alcohol, and of very hot or very cold substances, is due to a direct action on the mucous membrane, in the case of alcohol augmented by the arrest of digestion and the fermentation of whatever the stomach contains. The symptoms as gathered from two illustrative cases were about as follows:

Case I.—Obstinate vomiting, originating with seasickness, flushed face, eyes heavy, frontal headache, red and glazed tongue, mouth dry, pulse 100, great thirst, urine normal, bowels regular and abdomen normal. The patient complained of malaise and prostration.

Case II.—A man aged fifty-one, temperate, skin and conjunctivæ slightly yellow, pulse 60, and rather feeble; mental depression, tongue slightly coated, moist and indented by the teeth. There were anorexia, thirst and nausea, abdomen normal, urine normal, bowels obstinately constipated. Other symptoms of importance in similar cases are excessive flow of saliva especially during sleep when it runs from the mouth upon the pillow; flushes of heat, dryness of the palms of the hands and soles of the feet, harshness of the skin, catarrhal affections and other evidences of impaired nutrition. The urine contains urates, phosphates and oxalates. The stools are scanty, dry, scybalous and light-color; when there is intestinal catarrh they may be semi-liquid, frothy and composed principally of undigested food.

Treatment.—A careful regulation of the diet is very important in either acute or chronic catarrh of the stomach. Milk and lime water (three parts to one), chicken broth, beef-tea, oyster soup, etc., the object being to furnish food in a form easily assimilated, it should be given in small quantities and frequently repeated.

Much may be done by medication, beginning with bicarbonate of sodium combined with infusion of quassia or elixir of gentian, a small blister to the epigastrium will be useful. After one or two days of the alkaline treatment, tincture of nux vomica, nitro-muriatic acid, some bitter as quassia are given. In very chronic cases nitrate of silver pills are beneficial. To relieve constipation a pill composed of pulverized ipecac, one grain; cinchonidiæ sul. one grain; and pil. aloes et myrrhæ, two grains; is ordered after dinner. This general line of treatment is varied in particular cases, but the alkaline treatment seems to be most uniformly successful. The bicarbonate of sodium is given in doses varying from four to ten grains. The nitrate of silver in one-sixth grain doses. In atonic cases, dilute nitro-muriatic acid in ten drop doses in combination with calumbo, gentian or other simple bitter may be used from the outset.

In cases where very obstinate constipation exists a pill composed of extract of belladonna, one-sixth grain; extract gentianæ, one grain; extract colocynth compound, two grains; and oil cori, one-half drop, administered at bed time.

Frequent counter irritation over the epigastrium will afford marked relief.—Louis Starr, M. D., in *Philadelphia Medical Times.*

LOCOMOTOR ATAXY.

BY DR. GEORGE FISCHER,

Deutsch Arch. f. klin. Medicine, Band XXVI, page 83 (abstract in *Deutsche med. Wochenschr.* Number XXXVIII, 1880).

(1) The author calls attention to a peculiar connection between the patellar reflex and conduction of painful impressions in locomotor ataxia. Out of nineteen cases examined, there was retardation in fifteen, and normal conduction in four, in the lower extremities, and in these last he still found the tendon reflex, and normal condition of the bladder, both of which were lacking in the others. One case, which formed the transition beween the others, exhibited a peculiar condition; on one side there was impaired tendon reflex and pain-conduction, and on the other, the normal conditions. On physiological grounds, he thinks that in these cases, with the normal tendon reflex and conduction, the morbid process is confined to the posterior columns without implication of the gray substance.

(2) A symptom first described by Leyden, and more recently mentioned by Remak, is the separation in time of the perceptions of tact and pain in simple prick with needle. It indicates a simple diminution of the cross section of the gray substance with still functioning posterior columns. Among the fifteen cases with retarded pain-conduction, Fischer found this double sensation in eight. The examination for this phenomenon revealed a curious anomaly in the cutaneous reflexes. The

normal reflex acts, as is well known, according to Pflueger's law, along the motor nerves from that point of the cord where the sensory nerves excited join it. With stronger excitations it reaches still higher spinal centers, and motor nerves are involved which arise from points in the cord much higher than the junction of the irritated sensory nerves. With very strong excitations, through the medium of cerebral sensibility, a centrally-started reflex may take place closely resembling voluntary movement. The author observed various complications of reflexes and retardations in tabes:

(*a*) Two cases of retarded pain-conduction without double sensation and without any reflex; the first had pronounced hyperalgesia, and the second, muscular paresis. The lack of reflex activity was, in the first case, based upon disease of the central portion of the reflex arch; in the second, on disorder of its peripheral portion.

(*b*) Three cases of retarded pain-conduction without double sensation showed reflexes combined with conscious voluntary reaction. The spinal reflex act is the product of a cerebral transmission process.

(*c*) One case of retarded pain-sense without Remak's symptom gave a reflex synchronous with the prick. The sensory excitation thus reached the normal spinal reflex centre.

(*d*) Two cases of retarded pain-sensation with Remak's double sensation symptom gave reflexes synchronous with the consciousness of pain. The primary reflex arch in these cases was out of order, and the reflex must be considered as having a cerebral origin.

(*e*) In one case with retarded pain-sense and double sensation the reflex occurred at the same time as the prick and the corresponding tact sensation. This corresponds with normal reflexes as in *c*.

(*f*) In some cases with retarded pain-sense and Remak's double sensation the reflex occurred both at the point of contact and tact sensation, and at that of pain. In these cases the first is the spinal reflex, and the second is cerebral.

Of course, these varieties do not include all cases; there is every variety of transition between them.

(3) In some patients the author discovered a remarkable condition of the sense of locality. With simple contact of one point of the æsthesiometer, they felt the sensation of two, and with both, that of four or five points (polyæsthesia). The explanation of this is not clear. There is possibly an abnormal irritability of the gray substance, so that a wave of irritation entering a ganglion cell of the posterior horn extends itself. not merely in a central direction, but laterally through the fine nervous network, and is diffused into neighboring ganglia, which are connected with other centripetal routes from the periphery. This would produce to consciousness the impres-

sion of contact at each of these points connected with these ganglion cells. In this manner, the author explains the case of two patients, who, when brisk contact-impressions were produced on one leg, always felt it also in the other.

MM. Debove and Boudet, of Paris, *Archives de Neurologie*, Volume I, page 42, experimenting with a new apparatus, the myophone, invented by one of themselves, which gives the sound of the muscles in contraction and at rest, found a decided inequality in the tonicity of different groups of muscles in ataxics, which had begun to display the symptom of incoördination. It was not noticeable in those cases characterized only by the frequent pains of the incipient stages of the disease. They explain the incoördination of this disease by this lesion of tonicity, which in turn is accounted for by the disease of the posterior roots, as the section of these, experimentally, in animals produces locomotor troubles referable to loss of muscular tonicity. They cannot, in those cases, be assimilated to those of ataxics, because in the latter we have only inequality of tonicity, not complete loss of tonus; but the principle is the same. in both. MM. Debove and Boudet notice briefly the theories of the incoördination in tabes; that of Tschiriew, who attributed it to loss or diminution of muscular tonus; that of Pierret, who considered it to be caused by limited muscular paralysis; that of many authors, who have considered it due to loss of general sensibility; and after an analysis of the facts of the movements of ataxics, conclude that "the incoördination of tabetics is due to an unequal tonicity of their muscles, the effects of which are diminished by the maximum contraction of these muscles."

They do not refer to the idea largely held, and which seems to us rational, that the loss of the muscular sense has much to do with the incoördination. We are still inclined to attribute it, in part at least, to this deficiency.—*Journal of Nervous and Mental Diseases.*

NOTE ON THE DIAGNOSIS OF CAVITY IN THE LUNG.

BY SOLOMON CHARLES SMITH,
Surgeon to the Halifax Infirmary.

I have recently met with a peculiar physical sign of deep-seated cavity in the lung, of which I can find no mention in any of the books within my reach, and which seems worthy of being placed on record. It is a sound synchronous with the cardiac systole, not necessarily heard over the lung, but distinctly audible in the trachea, and even without the stethoscope when merely standing opposite the patient, and obviously produced by the impact of the contracting ventricle against a neighboring cavity, expelling such a puff of air as to produce a sound in the bronchus and trachea.

My first patient was a man suffering from cough, expectoration, and shortness of breath. While watching the expansion of his lungs I heard a bruit synchronous with the first sound of the heart; it was short and soft, but plainly audible when we were about eighteen inches apart. On applying the stethoscope over the heart nothing abnormal was heard, but over the lung to the left the bruit was easily perceived. Systolic bruit over the left upper lobe is, however, no strange thing in phthisis, but on tracing it up it was loudly audible in the trachea, and on careful observation it was plain that the sound was conveyed outwards through the air-passages. Easy respiration did not interfere with its production, but on breathing deeply or quickly it was interrupted during inspiration.

The other physical signs were dullness, diminished respiration, and expansion, with moist clicks over the upper five inches of the left lung, and some tubular cough sound at the third interspace.

In my next case the physical sign I have described was not so well marked—that is, it was more easily interrupted by inspiration, and could not be heard quite so far from the patient; but on the other hand, its connection with a cavity was more completely demonstrated, the presence of a vomica being proved by a concurrence of many physical signs.

I do not wish to add another to the many sounds which have been described as occurring in cavities in the lung; if this were audible only over the position of the vomica it would be a matter of no great interest. Any importance it may possess arises from its being transmitted to the ear through the air-passages rather than through the chest walls, and thus being audible even when the disease is deeply placed. I may add that in auscultation of the trachea and larynx a flexible stethoscope is of great service.—*The Lancet.*

MISCELLANEOUS ITEMS.

Some bladders are sacculated and cannot be emptied with a catheter.

In parturition the mother's bladder should always be emptied before the child is delivered.

In parturition a cystocele has been mistaken for the bag of waters. Such an error can only happen to an ignorant or careless practitioner.

To relieve retention of urine in a woman after child-birth, an elastic catheter with a bougie completely filling its interior should be used. This will prevent the instrument becoming clogged with mucus.

THE

PHYSICIAN AND SURGEON

A MONTHLY MAGAZINE,

DEVOTED TO MEDICAL AND SURGICAL SCIENCE.

VOLUME III. MAY, 1881. NUMBER. V.

ORIGINAL ARTICLES.

THE SYSTEMATIC STUDY OF CAUSES OF SICKNESS AND DEATH.*

BY HENRY B. BAKER, M. D.,
Secretary of the State Board of Health of Michigan.

The first and most constant need of the sanitarian is accurate knowledge respecting those most common of all occurences —sickness and deaths from diseases, which during years and series of years have afflicted mankind. If it seems strange that there is so great lack of knowledge on such common subjects, it must be remembered that sanitary science is one of the latest sciences, and that physicians, as such, have had no need to record or to note many of those classes of facts which form the foundation of sanitary science, though some have had occasion to contribute greatly thereto. The prevention of sickness has not been their work, and the collection of facts respecting vast numbers of cases of sickness or deaths involves labor and expense too great to be borne by individuals, unless the knowledge gained thereby is such as will advance the work in which they are engaged. It has not been apparent that sanitary science would greatly advance the art of healing or the science of therapeutics, for which other classes of facts are needed, and for which they have been diligently collected, in times past. Though it is possible that the science of therapeutics might be fostered and advanced by governmental aid, there seems to be

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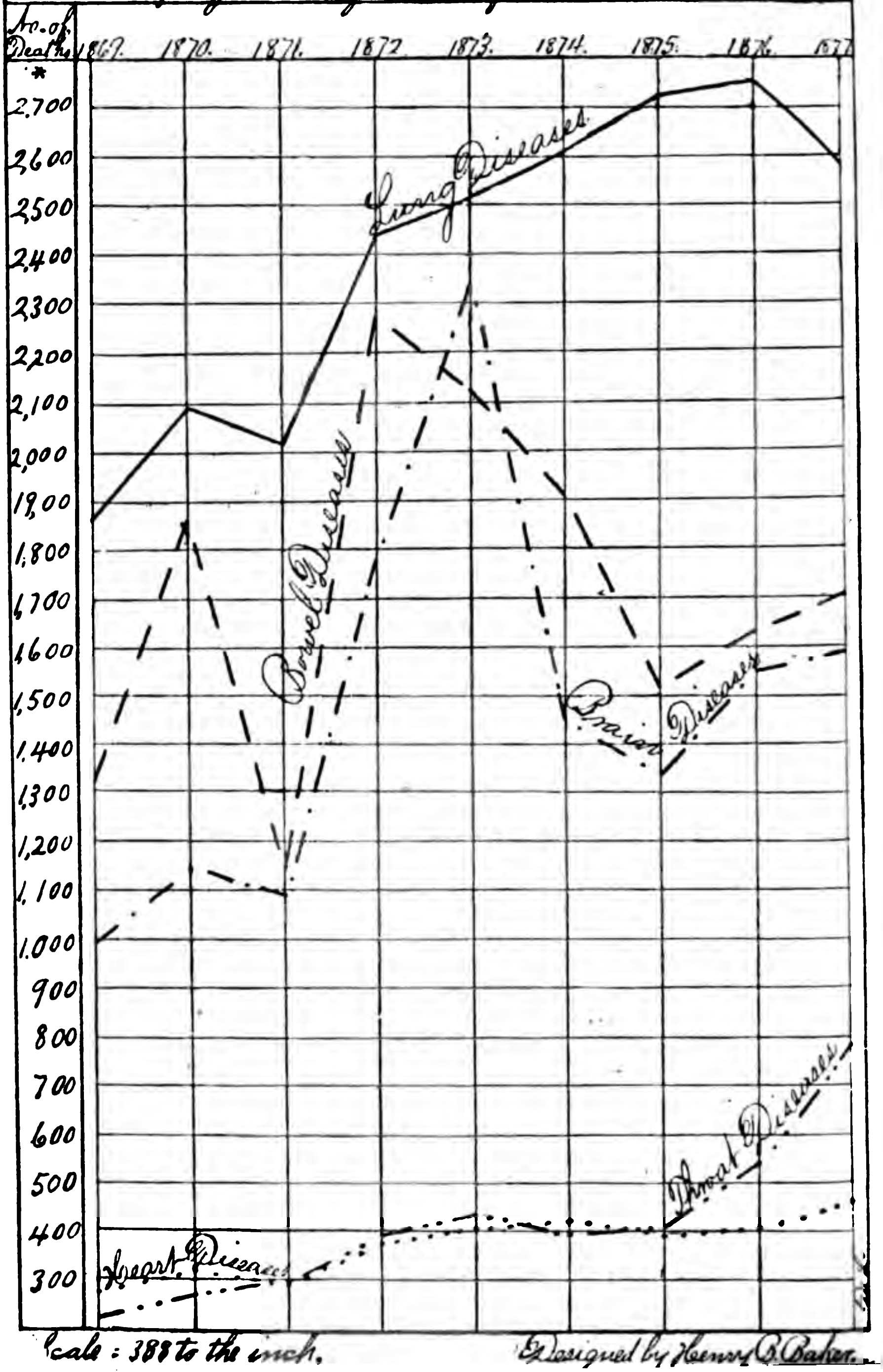
*A paper read at the State Sanitary Convention at Battle Creek, Tuesday evening, March 29, 1881.

Diagram No. 5.

Deaths Returned as having occurred in Michigan from each of Five Groups of Causes, for each of the Years 1869-1877.



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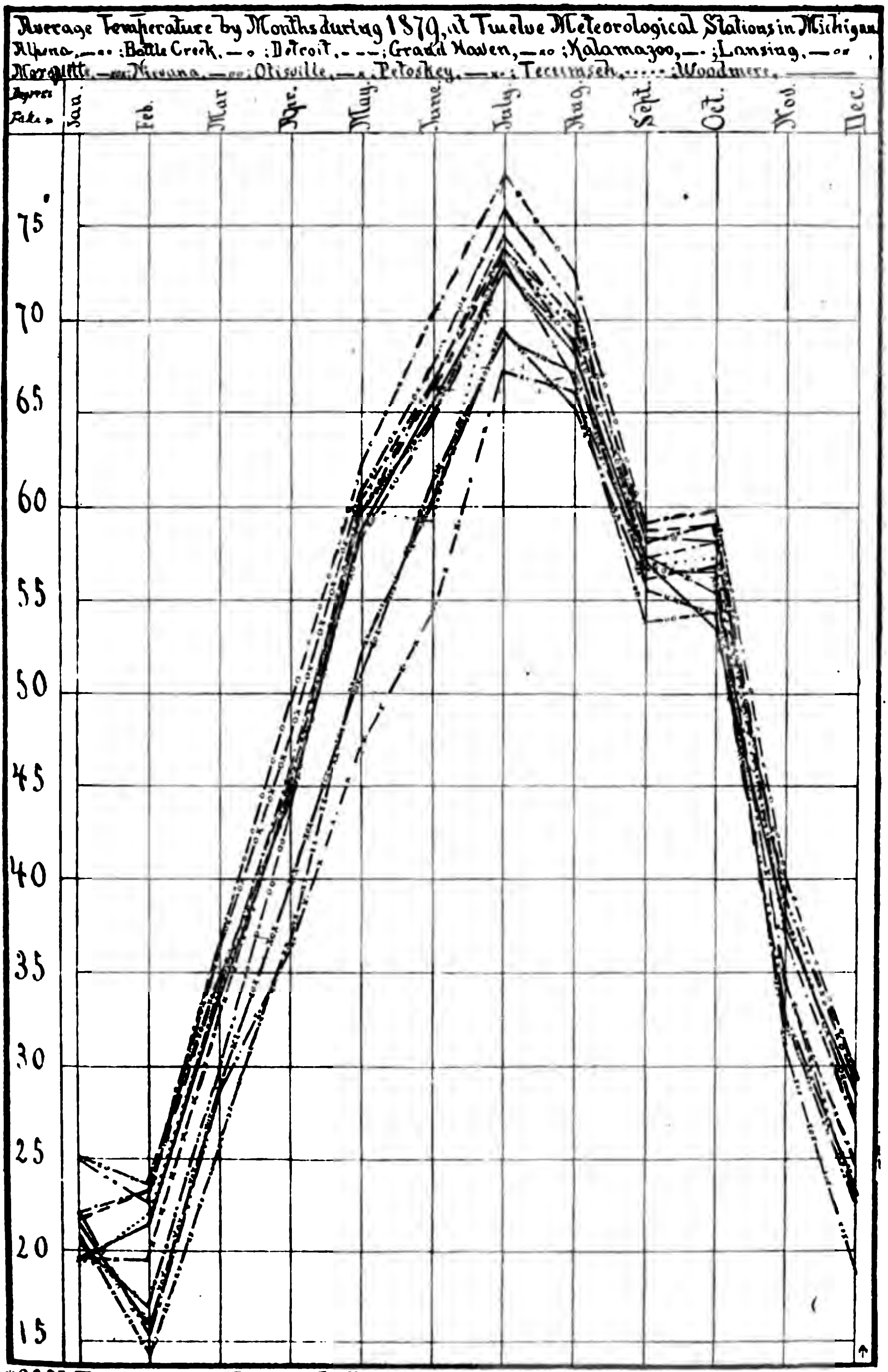
Designed by Henry B. Baker.



*SCALE, 10 Degrees F. to an Inch, vertically.

Designed by Henry B. Baker. Drawn by H. B. Turner & Jno. K. Allen.

no especial need for such aid so long as it is for the pecuniary advantage of individuals to perfect their knowledge of therapeutics in order to lead in the practice or teaching of their profession. But with sanitary science the case is very different—there never has been, and there is not now in this State, any class of persons having such an income from any public health service, by the individual citizen as will permit of any effort for the collection of those facts which are essential to the beginning of sanitary science. In the statement just made I do not forget that progress in sanitary science and improved health service increases the incomes of individuals generally throughout the State, this is undoubtedly true; but it does so by lessening expenditure and by increasing the ability to labor in ordinary and extraordinary pursuits. It is plain, therefore, that we cannot expect much progress in sanitary science without some such associated effort as that afforded by governments—State, National, and local. The old saying that "what is everybody's business is no one's business" is particularly applicable in this connection; for though it is readily granted by everyone we meet that "health is wealth," that "public health is public wealth," that "an ounce of prevention is worth a pound of cure," and that measures for the promotion of health are of vital consequence to every person, yet, except the government aids, there is now no person who can get a living by laboring for the prevention of sickness.

HOW CAN GOVERNMENT PROMOTE SANITARY SCIENCE?

The chief duty of a government is to do for the safety of a people whatever they are unable singly or by practicable voluntary associations to do for themselves. If, as is now known to be the case, people die or suffer in great numbers from lack of knowledge which only the government can collect and diffuse among them, evidently it is one of the highest duties of the government to collect and diffuse that knowledge. That hundreds of such deaths have occurred in this State in every year is now established by good evidence.

WHAT KNOWLEDGE IS NEEDED FOR THE PREVENTION OF DEATHS?

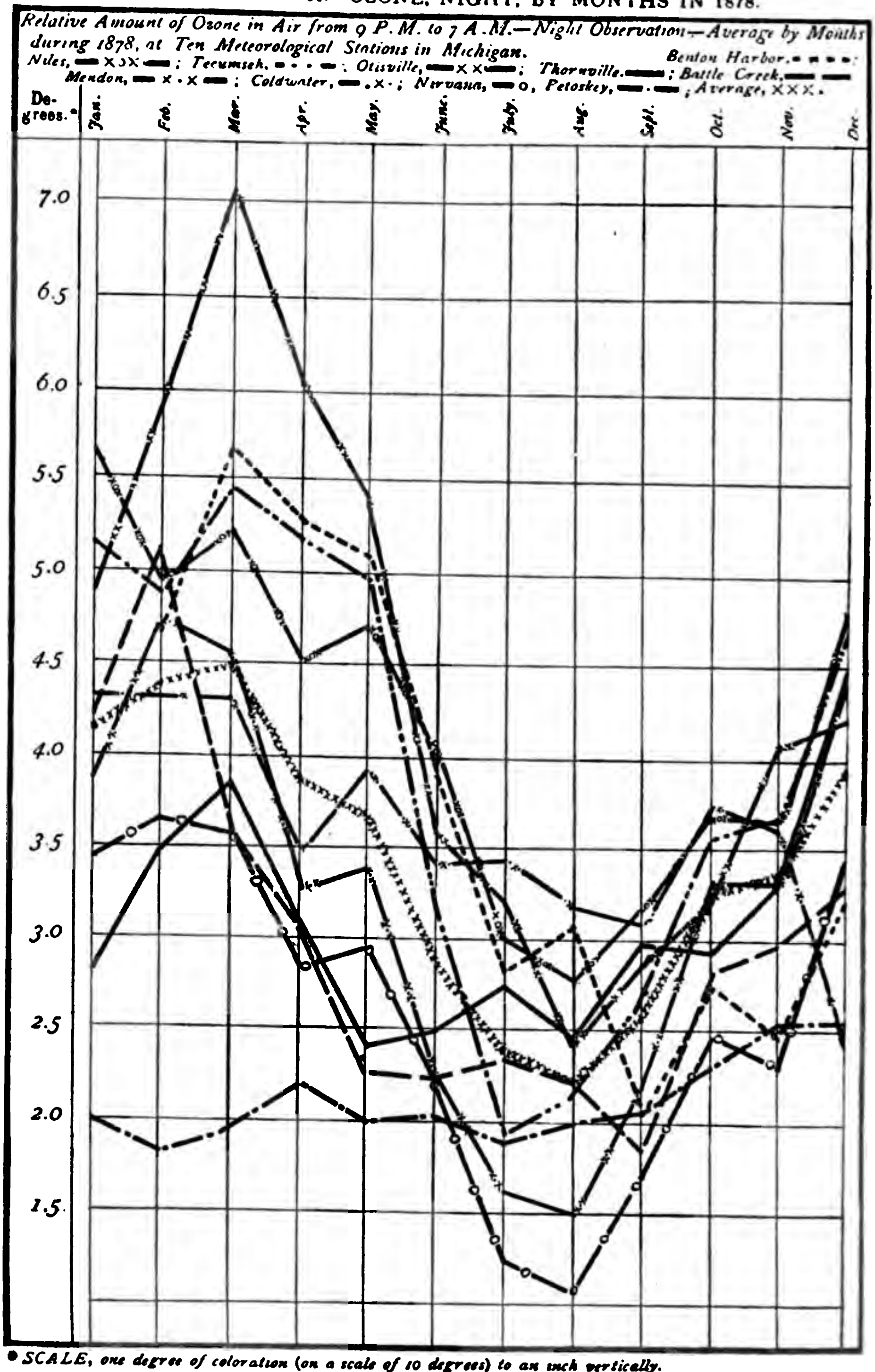
Manifestly the first requisite for the prevention of deaths is a knowledge of the causes of the deaths. This has long been recognized by intelligent legislators, and in most civilized countries "vital statistics" have for many years been regularly and systematically collected. The same is true in many of the States of this Union. The history of progress in public health movements shows that sooner or later the facts thus collected usually lead to some organized work for the prevention of deaths; thus in England annual reports by the Registrar General, relative to vital statistics, have been published since the year 1838, while reports by the medical officer of the Privy Council date from the year 1858, showing that after the beginning of vital statistics in England, twenty years elapsed before a general Board of Health was established with the view of attempting to systematize the public-health work, and make it more effective. In this country, in Massachusetts, vital statistics have been collected since 1842, and in 1869 a State Board of Health was established for the prevention of those deaths which the vital statistics showed to be most numerous. During the twenty-seven years preceding the establishment of a State Board of Health in Massachusetts, the statistics of deaths and their causes had been collected, published, and studied by citizens of that State, and the evidence was conclusive that many deaths occurred from causes known to be preventable, and many more occurred from diseases believed to be preventable or avoidable. In Michigan, vital statistics have been collected since 1868, and the State Board of Health was organized in 1873—following the first inquiry for facts more speedily than in the older countries, partly because the vital statistics of Michigan soon showed that in Michigan, as in Massachusetts, there were many preventable or avoidable causes of sickness and death, and suggested a similar agency for communicating to the people the knowledge necessary to avoid or prevent deaths from such causes.

It must not be understood that the vital statistics alone are sufficient to give this important knowledge. It is said that a single bone enabled Owen to construct or reproduce the skeleton and form of an extinct species of animals, and subsequent discoveries of fossil remains confirmed his hypothesis and heralded another of the grand triumphs of mind over the difficult problem with which thinking men everywhere are engaged. But it was to Owen, the diligent student of anatomy, the close observer of the many ways in which organ is correlated with function, and function with function, the learned teacher of the fundamental laws of structure and of the history and philosophy of structural development, it was to the keen eye and mind of such a man, and not to the mere delver in the earth by whose spade the bone was brought to light, that the communicative fossil disclosed its secrets of the past, its vision of the perfect form that should be revealed.

Thus it is not to the mere *compiler of vital statistics* that there is given a comprehensive view of the relations which the various classes of deaths, bear to the varying conditions of soil, climate, age, occupation, nationality, social custom, individual habit, and pecuniary circumstances, by which the people of a State are surrounded, and of the various means of prevention or avoidance, direct and indirect, by which it is possible to lessen the death-rate of a State, diminish its burden of sickness, crime and poverty, prolong the lives of its inhabitants, and promote their comfort, welfare and happiness.

The man or the body of men who, from its vital statistics, shall construct the public-health service of a State must bring

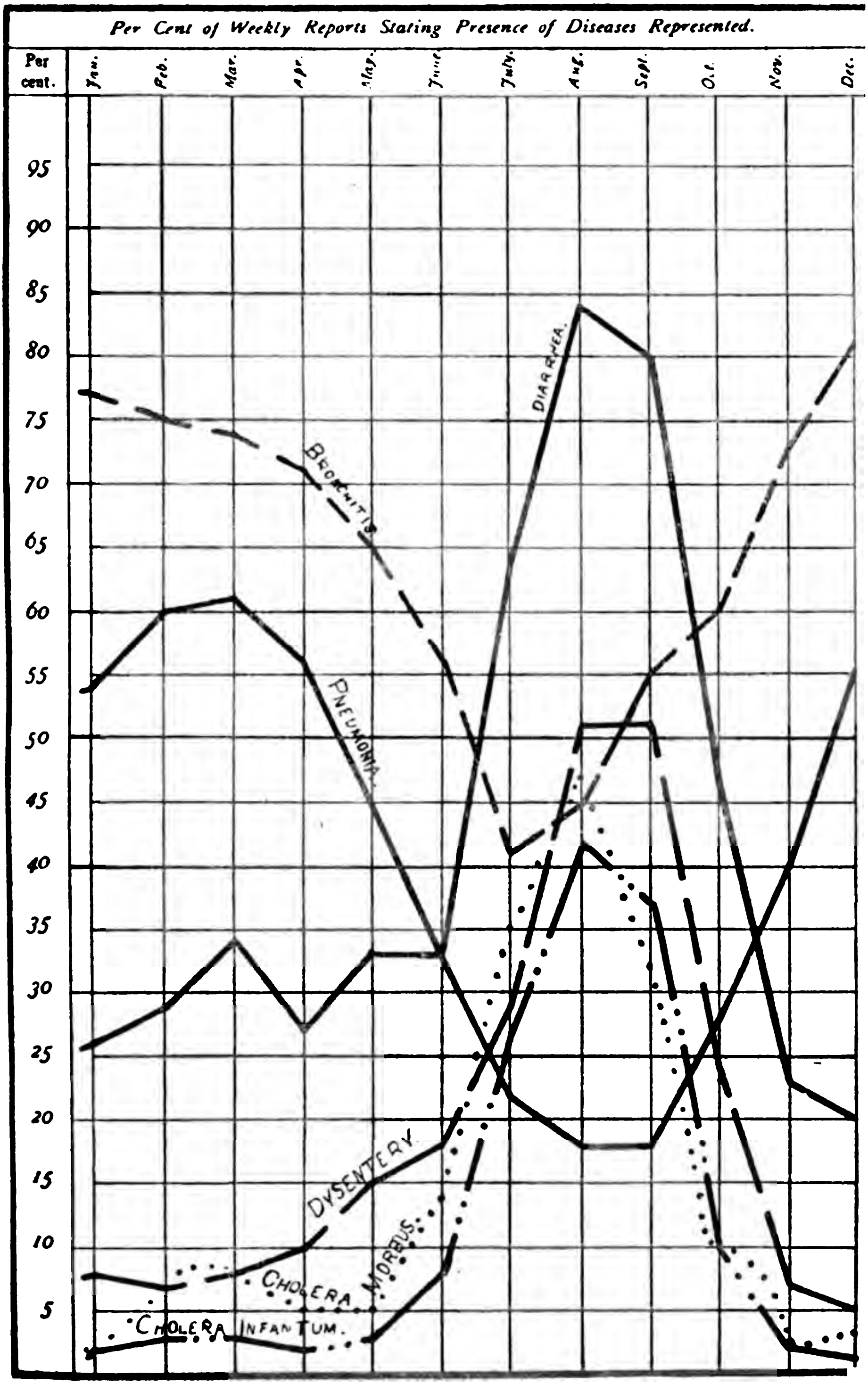
DIAGRAM No. VII.—OZONE, NIGHT, BY MONTHS IN 1878.



* SCALE, one degree of coloration (on a scale of 10 degrees) to an inch vertically.

Drawn by F. S. Kedzie. *Designed by Henry B. Baker.*

DIAGRAM No. 1 —DISEASES IN MICHIGAN. BY MONTHS IN 1878.



Designed by Henry B.

to the task the knowledge which can be acquired only at the feet of the masters of the medical sciences, and in the every-day walks of the physician, the familiarity with the manifold forms and habits of minute organic bodies, both animal and vegetable, which only the biologist has attained, the command of the inorganic substances and forces of nature which is bestowed only in the laboratory of the chemist, the knowledge of the formation and relative position of rocks and soils and of the relations of these to drainage and water supply which is the reward of the geologist, the knowledge of climate and of prognostications of weather which is the heritage of the meteorologist, the knowledge of the principles of government, and of the moral nature of man which characterizes the lawyer, the power of commanding the attention and addressing the conscience of the people which is the glory of the orator and the preacher, these qualifications and more are requisite not only to that study of vital statistics which shall discover the preventable causes of deaths, and elaborate practicable means for their removal or control, but also to that successful adaptation of means to ends by which the people shall be led to adopt and enforce practicable measures for their own protection and safety.

USES OF VITAL STATISTICS.

To vital statistics we are indebted not only for evidence showing the necessity of effort for the prevention of deaths, but such statistics are needed for constant reference in studying methods by which the deaths may be prevented. Before we can act intelligently for the prevention of deaths from any given disease or cause, we need to know the time of year at which the danger is greatest, the age at which a person is most in danger, to persons of which sex the danger is greatest, whether the danger is greater in one part of the State or country than in another, and many other facts. Vital statistics accurately collected, compiled and studied, for a period sufficiently long, will give us such information.

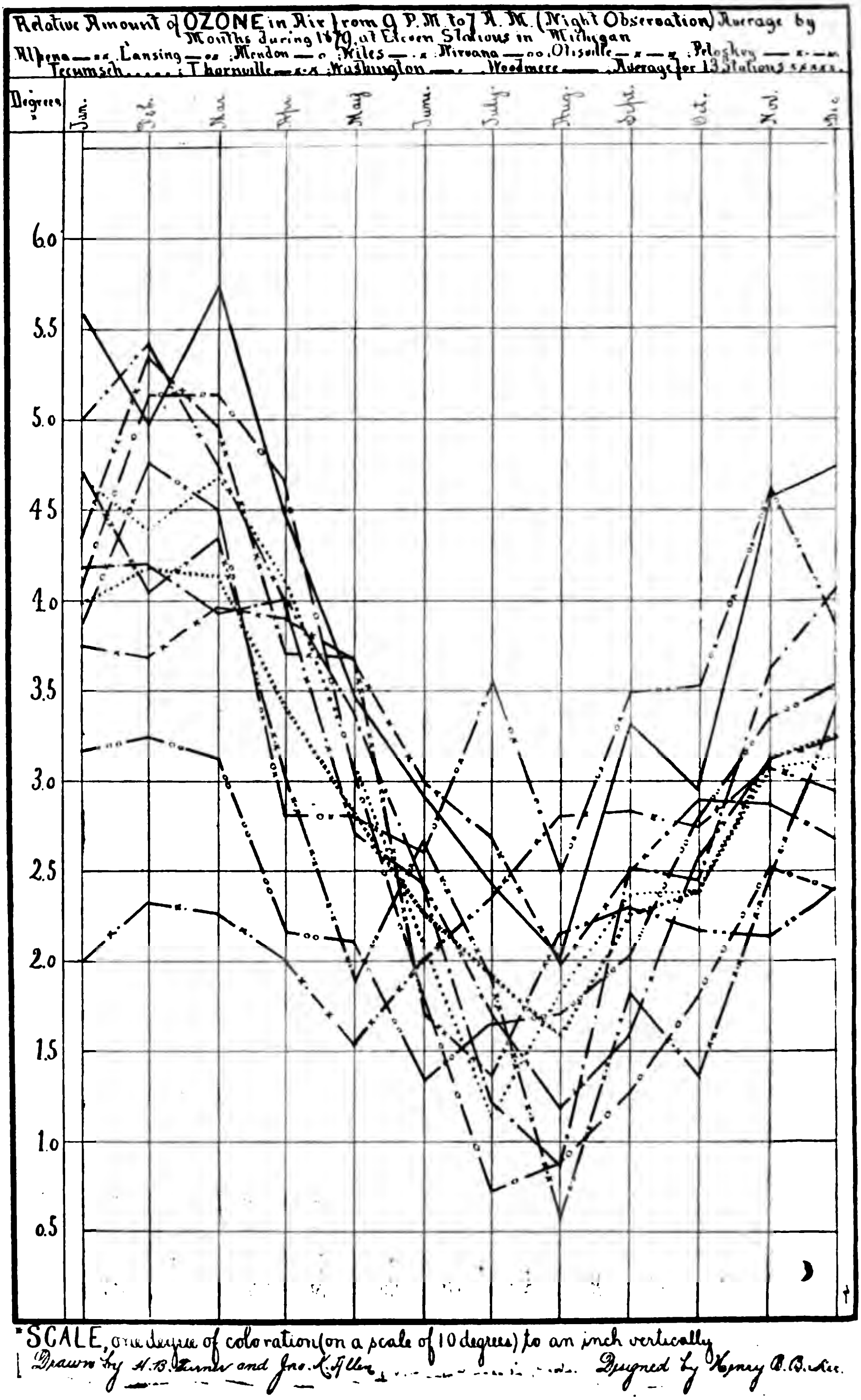
WHAT ARE "CONTRIBUTIONS TO SANITARY SCIENCE?"

It is, I think, just as important to "know a good thing when we see it" in public health work as in any other affair; therefore it is well to bear in mind that popular books and articles are not usually "contributions to science," that papers (such, for instance, as this one) read at public meetings are not usually "contributions to sanitary science," and that really valuable "contributions to science" are not commonly easy and pleasant reading, notwithstanding their high value in advancing existing knowledge. A science is built up by the accumulation of numerous facts, which, ultimately, are grouped so as to exhibit general truths. When an individual or a government collects numerous facts, and skillfully groups those facts so as to lead to new knowledge bearing upon the problems with which public health work deals, that individual or that government makes an important contribution to sanitary science. However useful it is to have essays on public-health work in all its various departments, and however much good may be done because of the stimulus of such essays, which I consider essential to progress in sanitation, yet it must not be forgotten that the real solid basis of all such work must be laid in the patient, painstaking accumulation of facts (such as physicians are freely contributing), their classification, comparison, collation, provisional grouping and final grouping, so as to serve as bases of action. Thus the recognized basis of sanitary science is statistics of deaths, of sickness, of meteorological and other surrounding conditions, though very much more than such statistics is needed for an effective public-health service.

USEFUL FACTS FROM THE VITAL STATISTICS OF MICHIGAN.

Facts illustrating the nature of some of the information gained by means of vital statistics already collected in this State, may be given. It has been learned, for instance, that in this State, during a long series of years, the danger from small-pox was not as great as the danger of death from whooping-cough, there being twice as many deaths from whooping-cough as from small-pox (though the proportion of children is greatest among those who die from whooping-cough). It has been learned that diseases of the lungs cause nearly one-fifth of all the deaths reported in this State, and that nearly one-half of all the deaths are attributed to diseases of the lungs, the bowels, and the brain; and it is found that a large proportion of the deaths from each of these three groups of diseases are reported to be caused by tubercular diseases, such as consumption of the lungs, consumption of the bowels, tubercular disease of the brain and coverings, etc., so that if, as now seems probable, sanitarians shall soon be able to class consumption among the preventable diseases, and to teach people how to prevent a considerable proportion of the deaths now charged thereto, it will be one of the grandest achievements of the century, for it will add more to the financial prosperity of the people than can be easily computed, hundreds of thousands of dollars annually now being lost to the people of this State by reason of sickness and deaths from consumption; and then the anguish of human hearts beyond any power of computation or expression!

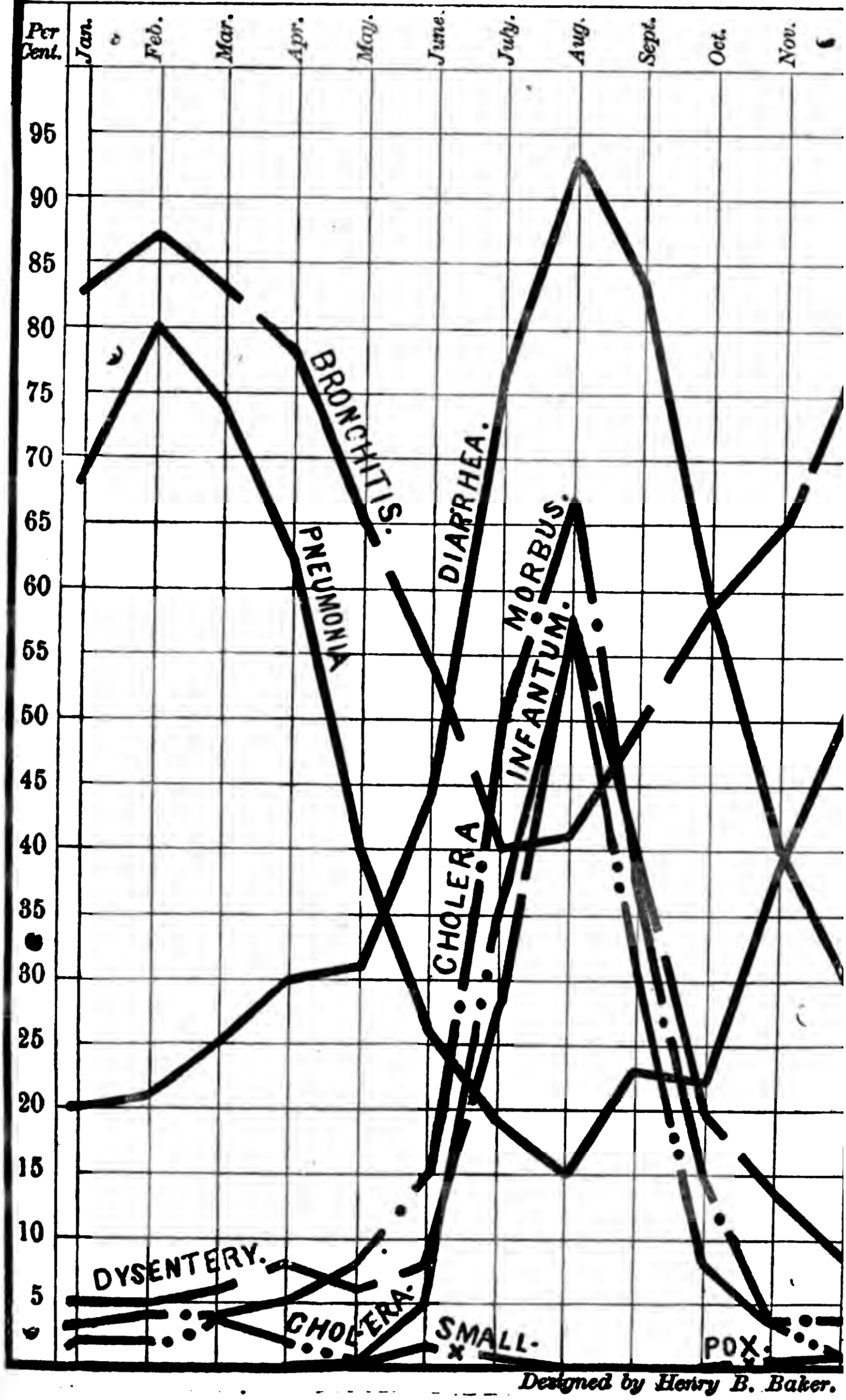
The deaths reported from consumption in Michigan will average over one thousand four hundred annually, and there is evidence that the number reported should be much increased in order to equal the deaths which actually occur; probably two thousand persons die in this State in every year from consumption. And yet compared with many other States, Michigan is a very healthful State, and we are accustomed to regard these deaths as inevitable, indeed, as a rule, they seem to be when once consumption has been contracted; and up to this



*SCALE, one degree of coloration (on a scale of 10 degrees) to an inch vertically

Drawn by H. B. Turner and Jno. K. Allen. Designed by Henry B. Baker.

Per cent of reports which stated presence of diseases represented.



Designed by Henry B. Baker.

time no effort has been made to prevent the spread or occurrence of this disease. It may serve to awaken enthusiasm sufficient to start some effort for its study and restriction, if we consider that consumption is now proved to be communicable from man to lower animals; that there is good evidence that the disease may be communicated from animals affected with it to man—as, for instance, to susceptible children by means of milk of a tuberculous cow, to any susceptible person by means of insufficiently-cooked meat of a tuberculous animal; that there are hundreds tuberculous cows and other animals; and that consumption is probably spread among people in unventilated rooms by breathing air which has come from the lungs of persons suffering from consumption. The evidence of this last proposition is twofold, because from statistical and other evidence some have been convinced of the truth of it, and lately experiments have shown that dogs will contract the disease if caused to breathe air in which tuberculous matter has been atomized. Let us place these facts by the side of those others which the vital statistics give us—namely, that counting all children and grown people in this State, at least twelve per cent. die from consumption—an average equal to every eighth person you meet in this State; and we may add that the death rate is reported about double this among persons over fifty years of age; thus we begin to see abundant reason for tremendous effort to learn the whole truth, and then for another effort for the prevention of this great waste of human life which is going on among us.

THE VALUE OF REPORTS OF SICKNESS.

Until recently sanitarians have been obliged to accept as their best guide, in the study of the causes of sickness, the facts reported concerning the number, time, and alleged causes of deaths; but evidently there is much sickness which does not result in death but which nevertheless it is very desirable to prevent if possible, and there are many deaths having a remote cause in sickness or other conditions quite different from those immediately preceding the death and likely to be reported as its cause; so that statistics concerning the sickness of a people are no less necessary than those concerning deaths. Weekly reports of sickness also serve to announce to a State Board of Health, outbreaks of communicable diseases, and thus enable the Board to direct attention in various parts of the State where such diseases occur, to necessary measures for the restriction and extirpation of the disease. For such timely work by the State Board, a system of prompt and regular reports of sickness is essential. Yet it is only for a few years that the attempt has been made to collect statistics of sickness; and at this time I know of no such systematic effort being made elsewhere for the collection of facts respecting sickness as that by the Michigan State Board of Health. This Board receives weekly reports of the sickness under the observation of many of the leading physicians in this State, about one hundred of whom in nearly as many different parts of the State promptly notify the Board of the outbreak of any communicable disease, and regularly report concerning the relative prevalence of cases of each of the prominent diseases under their observation. This makes it possible for the State Board of Health to send promptly to each locality, documents bearing upon the restriction of any particular disease which occurs, concerning the restriction of which the State Board has gained useful information; provided the State Board has the means to print and to distribute documents in that manner; and such distribution is desirable even if the document has been generally distributed before, because, during an outbreak of a disease, many will seek and gain information relating to that disease who will not do so at other times. But aside from keeping the State Board constantly informed concerning the health or sickness of the people, the weekly reports of sickness have great value as contributions to our exact knowledge on the subject; because the facts thus reported can be systematically arranged, compiled, and joined with other facts similarly arranged respecting the surroundings of people at different ages and at different seasons of the year, and knowledge may thereby be gained which will eventually enable the Board to tell people the conditions under which sickness from each of the prominent diseases occurs, and the conditions under which it does not occur—knowledge which must be gained if we are ever to be able to avoid or control those conditions which are now permitted to cripple and to destroy so many prematurely.

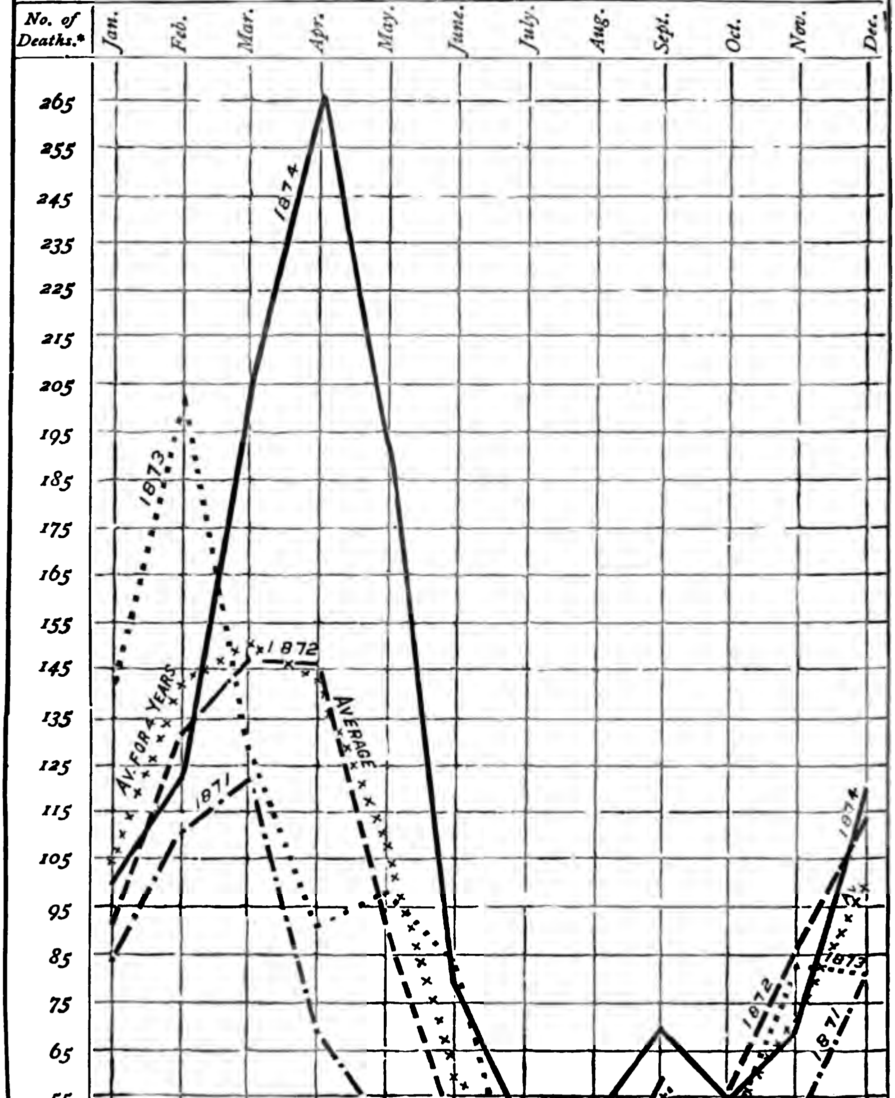
METEOROLOGICAL AND OTHER CONDITIONS MUST BE KNOWN.

In order to build up a sanitary science which shall serve as a basis for the prevention of sickness and deaths, it is essential, as has already been said, to have facts from more sources than one. It is not enough to know that there are more deaths from inflammation of the lungs in winter, and more from diarrhœa in the summer; we need to know to what condition of the air, what condition of the body, or of its surroundings, the increase of deaths or of sickness is due, before we can consider the best methods for changing or for avoiding those conditions.

Only by long-continued watching, recording, and studying the meteorological conditions can we learn whether it is the cold, the absence of moisture, the excess of ozone, or the action of the wind, which causes so many more deaths from diseases of the throat and air passages in winter than in summer, or whether all these are but indirectly related to the subject and the real cause is, as Dr. A. N. Bell has recently suggested, filth, which can easily be removed or avoided. Yet nothing is more certain than that if systematic effort is made we can learn which of the conditions are invariably coincident with the dis-

DIAGRAM No. 10.

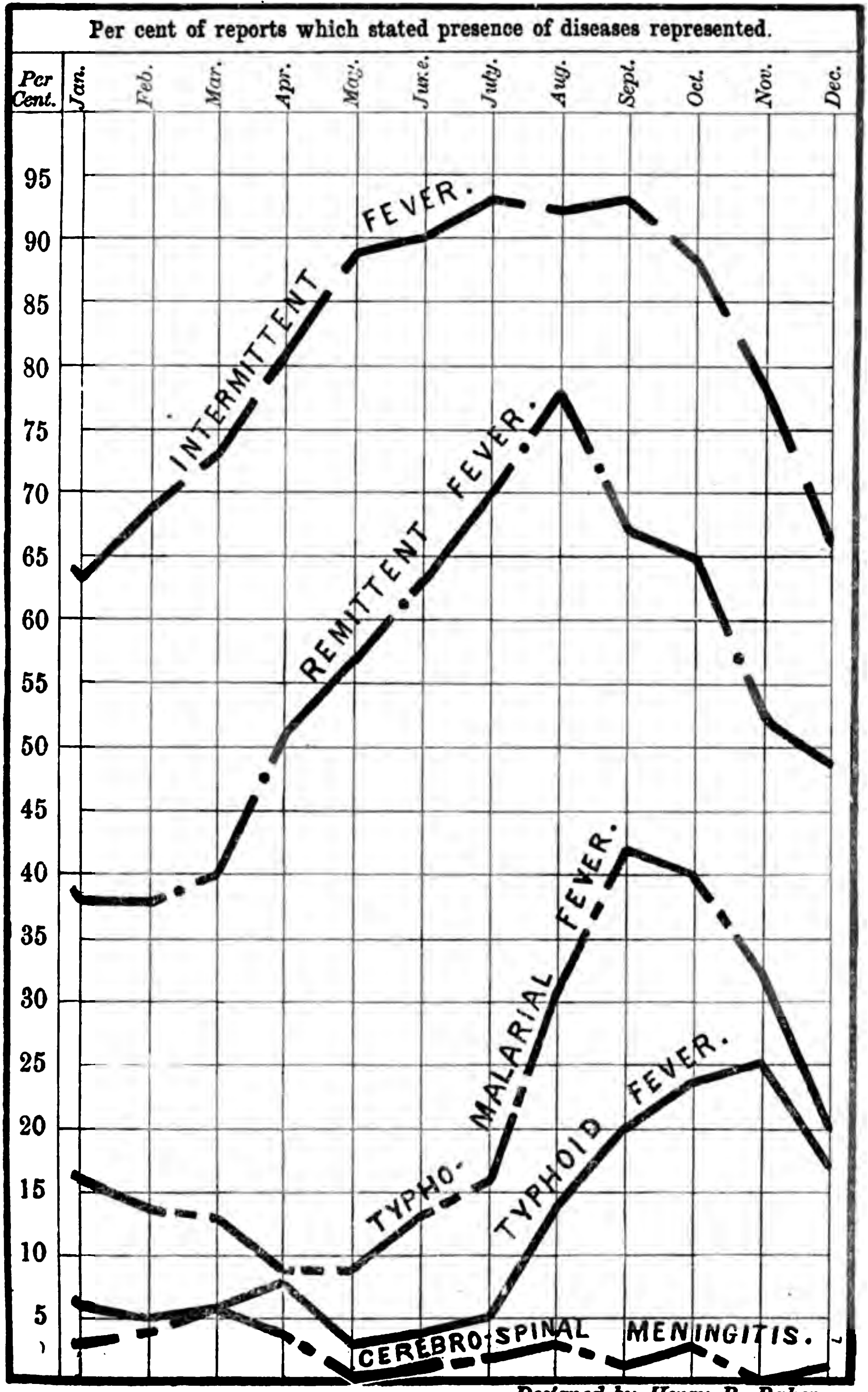
Deaths in Michigan from Pneumonia Corrected for Omissions in Enumerating, Equalized for Increase of Population, and Equalized to Months of Uniform Length, for the Years 1871, 1872, 1873, and 1874, and Average for 4 Years ending with 1874.



*Scale=40 to the inch. *Drawn by L. De Lamarter.* *Designed by Henry B. Baker.*

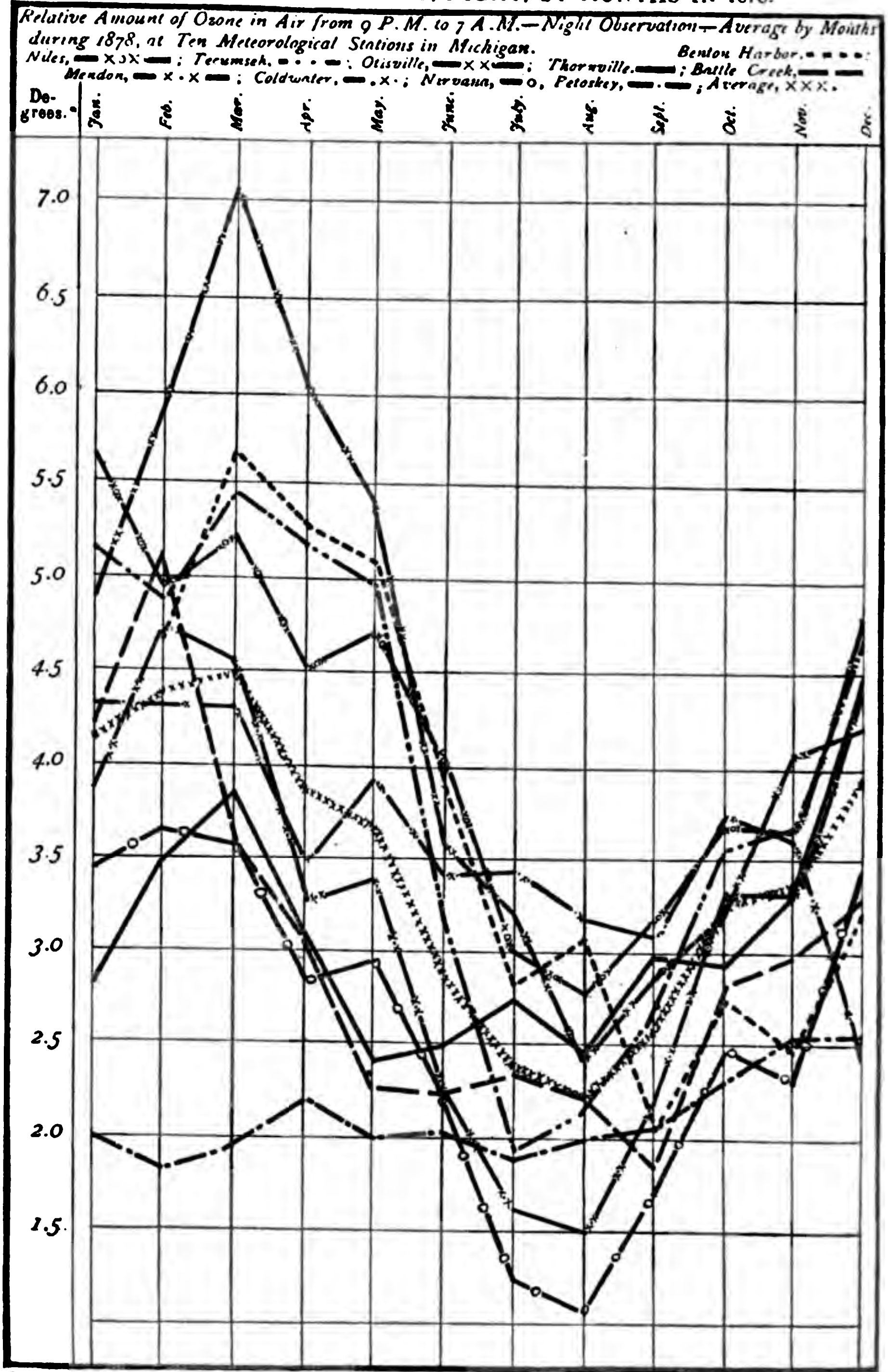
MICH. ENG. CO.

DIAGRAM 3.—WEEKLY REPORTS OF DISEASES IN MICHIGAN, IN 1879.



Designed by Henry B. Baker.

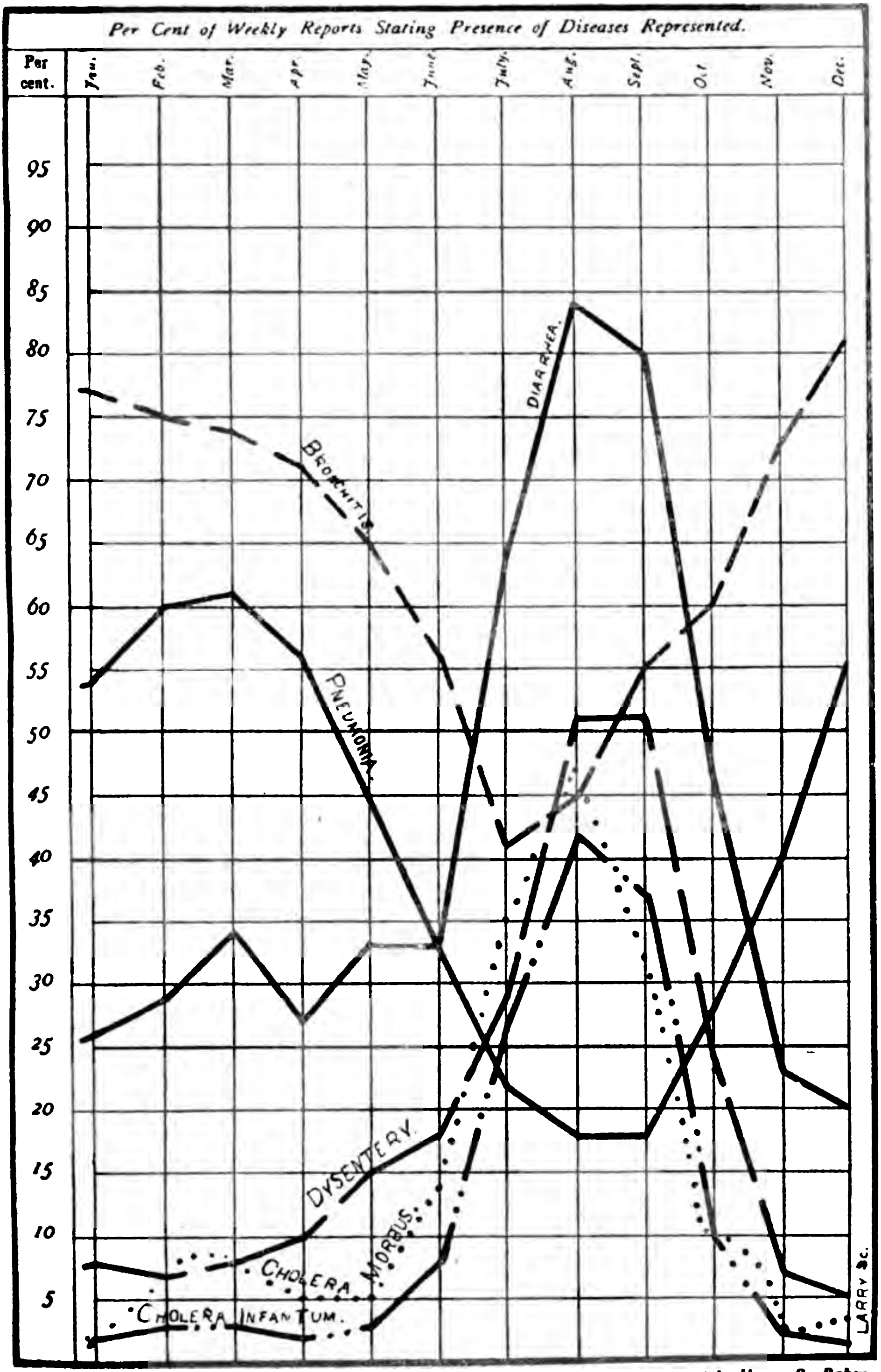
DIAGRAM No. VII.—OZONE, NIGHT, BY MONTHS IN 1878.



* SCALE, one degree of coloration (on a scale of 10 degrees) to an inch vertically.

Drawn by F. S. Kedzie. Designed by Henry B. Baker.

DIAGRAM No. 1 —DISEASES IN MICHIGAN, BY MONTHS IN 1878.



Designed by Henry B. Baker.

set in. Comparing this diagram with the two numbered 1 (pages 199 and 203) it may be seen that the evidence relative to to the *deaths* from pneumonia (compiled from returns made by supervisors) corresponds closely with the evidence of *sickness* from pneumonia, as reported to the State Board of Health weekly by the leading doctors in the State. By comparing all the diagrams just mentioned, it is evident that the system of reporting deaths yields valuable data; and the same is true respecting the weekly reports of sickness, for the two diagrams numbered 1, relating to sickness from two strongly-marked classes of diseases, for the years 1878 and 1879—give substantially the same replies to our inquiry as to months of greatest sickness from each of the diseases represented therein, and nearly every variation seems to be accounted for on referring to diagrams representing the meteorological conditions. In comparing the diagram of temperature (page 195) with diagram number 1, (page 203) the importance of the evidence of the meteorological conditions is so apparent at a glance as to attract the attention of even the careless observer, but there are even closer coincidences that may not be so readily noticed; on page 198 it may be seen that the line of xxx's representing the average of ozone by the night observations corresponds almost exactly with the line representing pneumonia in diagram 1 on the opposite page. On pages 202 and 203 are similar coincidences.

By means of such diagrams it is possible to gain information which cannot be gained in any other way; for they enable a person to follow with his own eyes the rise and fall of each disease and of the temperature, ozone, pressure of atmosphere, or other meteorological condition, and to see at a glance whether the rise and fall of the disease coincides with the rise and fall of any condition of the air, or whether there is any constant coincidence such as would indicate a relation of cause and effect.

In the diagrams which I have submitted for your inspection, it is easy to see that very strongly-marked relations exist, as, for instance, between the great heat of summer and the rise in the lines representing sickness from diarrhœa, cholera-morbus, cholera-infantum, etc., and between the cold dry air in winter and spring, and the increased sickness from inflammation of the lungs, and other diseases which nearly disappear during the warm months. In order to fix definitely the causes of sickness and deaths, the subject must be studied for periods and series of years and in detail, comparing the deaths in different parts of the State with the meteorological conditions in the localities, respectively; and it is essential to learn what other conditions besides those usually observed by meteorologists have influence in causing sickness and death, as for instance, what are the influences of swamps etc., upon sickness from intermittent and other fevers, and what relations exist between the outbreak of communicable diseases among children at certain seasons of the year and the general opening of schools at that season of the year. For these latter purposes the State Board of Health in this State systematically collects the facts and opinions from leading physicians throughout the State, who consent to act as regular correspondents of the Board, and make replies annually to printed questions, which replies are usually published in the Annual Reports by the Board, and are thus placed upon record for whatever bearing upon problems in sanitary science they may at any time hereafter be found to have. Thus they are contributions to sanitary science, even though some of the statements are not quite as definite and exact as are those based upon observations made with instruments of precision.

SPECIAL INVESTIGATIONS.

Sanitarians must do more than utilize contributions from meteorology and from each of the other sciences; they must make original investigations such as will result in the actual creation of knowledge never before attained; this is the grand mission of sanitary science in behalf of human welfare, and for this sanitarians must face up to nature in ways never before attempted by human beings, and must bring back from this search after revelations, portions of that eternal truth which will teach us the way of life, the way of health, and the way of happiness.

What some of the points are concerning which special investigations are needed, it may not be amiss to say a word here. With regard to small-pox, diphtheria, and scarlet fever, three dreaded diseases which afflict our people, the State Board of Health, in common with the leading men of the medical profession generally throughout the State, already know enough to suppress these diseases if the people could be put in possession of the knowledge and would act upon the information, which, however, is not likely to be placed before them, unless the State Board of Health can have the means for this important service. In fact, small-pox is practically suppressed in Michigan to-day, and diphtheria and scarlet fever have, in many instances in this State, been stamped out of existence in localities where they have appeared. The way to *control* scarlet fever or diphtheria is not, as seems to be the opinion of many intelligent people and some physicians even, to wait until the disease has taken possession of an individual and then do something to him to kill the disease, provided that the disease does not first kill him, but to keep the disease out of him from the first by keeping it away from him and him away from it; and to shut the disease into the closest possible quarters and then burn it out or smother it in its most secret lurking places. This is possible, it is practicable, and when all our people join hands to do it, it will be as easy as it is now to keep the wild bears of the forest from our homes; but without efficient local boards of health, and general co-operation by the people no family can protect itself from either scarlet fever or diphtheria. With regard to diphtheria, however, there are questions which it would be of use to have decided. We know that the living germs or the poisonous elements which cause the disease are reproduced within the human body, and that in various ways, direct and indirect, the disease is communicated from one person to another; in other words we know that the disease is *contagious;* whether it is also *infectious*, that is, whether the invisible germs or elements of poison whose presence in the body causes the disease are also sometimes reproduced in substances outside the body, how long they can live (or continue efficient to cause disease) in substances outside the human body, and in what substances they can live and retain their deadly power, are questions the correct and unquestioned answers to which would be of great use in preventing the disease and in destroying its cause. It would also be of service to know what it is that makes some epidemics of diphtheria much more malignant than others, for thus we may be able to substitute mild for malignant epidemics in some such way as is done for small-pox.

We know that the typhoid fever poison is communicated by water and by milk; but we need investigations to learn in what other ways it is communicated, and how it is propagated, whether always in the body or sometime outside the body, and in what lower animals.

There is much, too, that needs to be known concerning consumption; but on this point more is said in another part of this paper.

The question of the causation of intermittent *fever*, or fever and ague, as it is called, which we now know to cause more sickness in Michigan than does any other disease, is still an unsettled question; and while much has been done toward preventing it, by drainage, by cultivation of the soil, and by planting of trees, it would be a great boon to the people of this State if we could know certainly what are the relations of intermittent fever to marsh land, or what it is connected with over-flowed land that so greatly favors the disease, what are the conditions both subjective and objective under which ague is certain to arise, what is the specific poison of the disease, if such there be.

CLIMATIC DISEASES MAY BE CONTROLLED OR AVOIDED.

With increasing facilities for travel it may soon be practicable for human beings to gain as much control over their climatic conditions as the wild geese have so long enjoyed; but before this can be realized we must know as much as the geese do—for they seem to have gained that knowledge which mankind are so slow in gaining, and for the progress of which I am pleading, namely such knowledge as will enable any person to know the special danger at each age and at each season of the year in each habitable portion of the earth. But I would not be content to stop with the knowledge of a wild goose; because of the expenses of travel and the many difficulties in the way of periodical movements of the population. There *are* animals who know enough to take care of themselves in warm or in cold season of the year, particularly in climates so favorable as that in Michigan; and I see no reason why men may not eventually learn to do as well, if only they will admit the feasibility of so doing and will devote a necessary part of their energies to this undertaking. In order to accomplish it, however, it seems to me essential that there shall be organized effort, and especially that those whom we elect to apportion the expenditures of the State, in the interest of the whole people and not for the exclusive benefit of local or class interests, shall understand the aims and purposes of the systematic study of the causes of sickness and death, and shall recognize those purposes as high and noble.

I hope no one will infer that in this paper all the work of the State Board of Health is mentioned; in view of the many other labors by the Board, and by individual members of the Board, it is my duty to say that this paper relates only to a small part of the work of the Board, a part which less than many other parts has to do with its every-day work at the present time, such, for instance as the dissemination of information already gained; yet it seems to me that it is work which it is absolutely essential to have done in order that future progress in sanitary science and service shall be possible; and it cannot be done except by thorough co-operation among several classes of people. The purpose of this paper is, therefore, the hope of creating a greater interest in a subject which I deem of vital importance to our fellow-men.

NOSTRUMS IN THEIR RELATIONS TO THE PUBLIC HEALTH.*

BY ALBERT B. PRESCOTT, M. D., F. C. S.,
Professor of Applied Chemistry in the University of Michigan.

This is a class of articles, risen into importance in this generation, and already of very extensive consumption, articles which are not food, but are taken into the body, and therefore concern the welfare of the body and the vigor of the commonwealth. These articles are everywhere presented to individuals for the restoration of health, but they are not defined or described in any of the books or schools of medicine, they receive no supervision from any organized body of learning, no direction from any responsible authority. Nothing can be found out about them from any established sources of information; none of the associations of commerce or industry or science take charge of them, and, as they closely relate to the health of the public, it is certainly right that Boards of Health should have some care for them.

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*A paper read at the State Sanitary Convention at Battle Creek, March 30, 1881.

In common and indefinite parlance they are known as "patent medicines", but only a few of them are in fact patented. If they were held under rights patent, the records of the patent office at Washington would reveal their composition, to such as would take the trouble for the search. Their titles or trade-marks are usually secured under copyright; but the titles seldom give any servicable information of their constituents. They are spoken of as "proprietary articles", each one being presented on the authority of some person as its owner. The fact of individual ownership is to their credit just so far as their proprietors are held responsible to their consumers, but for the most part they are issued by men unknown to the public and nowhere having reputation for competence in the treatment of the human system for disease. Honorable men are engaged in their sale, and good men may be employed in their manufacture, but these persons are not legally responsible for the good faith of the manufacturers. Certain of their proprietors have an abundant financial responsibility, and yet, whatever may be the reason for it, not one of them appears to be actually held as accountable in money or in person for any degree of correctness in his published statements as to the contents of the articles which he sells to be taken into the human body. Physicians are now and then brought into court on charges of malpractice, but the proprietors of special medicines are quite beyond the probability of prosecution. The one feature of this class of articles which more than any other compels our attention is that of their concealed composition. They are put up in packages *not marked with the names of the substances they contain but with the names of the diseases they are to be used for.* They may be termed nostrums. A nostrum is defied by Webster as "*a medicine, the ingredients of which are kept secret* for the purpose of restricting the profits of sale to the inventor or proprietor." It does not matter what purpose the proprietor has in trying to keep a secret of the ingredients; it only matters to the public that the article is presented without a fair and simple statement of the things that are in it.

Now to what extent are the so-called "patent medicines" consumed in the United States, in the State of Michigan, in the civilized world? In the absence of statistics, an estimate sufficient for present considerations may be asked of any person who walks abroad in these days. A few years ago, an inquirer drew the conclusion* that about eighty million dollars worth

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*Dr. R. W. Murphy: *Pacific Medical and Surgical Journal*, May, 1874.

are annually sold in the United States, this being at the rate of two dollars for each man, woman and child in our country. This may be below the true estimate. But it is an outlay exceeding that for some things in which we are held to be liberal. For the salaries of all the teachers in all the public schools of this proud State of Michigan the yearly payment amounts to but one dollar and thirty-two cents for each inhabitant. The total expenses in the public schools of the United States do not require payment of over two dollars from each inhabitant. We may claim, then, an equal liberality toward public schools and patent medicines, with partiality toward neither. In England, in 1879, the stamp tax on nostrums was two-thirds of a million of dollars. In Germany, although the law has undertaken to restrict or prohibit them, they are sold in immense quantities, American nostrums competing sharply with those of *der Vaterland.* In spite of regulations by the French Government, Paris is a center of trade in the nostrums of the world. Russia is plagued with them, and licences a part and prohibits the rest. The Swiss Federation has been trying to prohibit the sale or advertisement of medicines of secret composition. Belgium is setting about to prohibit their importation; she will not tolerate humbugs of foreign origin. The United States taxes them. A single proprietor, perhaps not the most extensive, has paid our government $120,000 per annum for stamps to put upon the nostrums of his own production. At retail, then, the people paid three million dollars a year for this man's wares, and his own annual income was not far from one million dollars. This amount equals the average net income of a railroad three hundred and eighty-four miles long, in the United States, in the year for which this comparison was made. There are extensive wholesale dealers in "patent medicines" alone, and the catalogue of a single house has included fifteen hundred kinds of nostrums. No small share of the trade of the fifteen thousand drug stores, and of a considerable number of grocery stores, in the United States, consists in the sales of nostrums, and yet a single "patent-medicine king" may make as much net profit in a fortunate year as all the retail drug stores in a city like Detroit, with their patient service of filling prescriptions by day and night, and with their paltry commissions on the nostrums included. How much is paid for advertising nostrums, who can tell? Some one has said, over ten million of dollars a year. Enough to give over twenty universities of the first class, with free instruction, a better support than Harvard possesses. You have a piece of property to sell, or a legitimate and thriving business to cultivate, and you advertise it liberally in one or two of your local papers, but a man who is putting a pill on the market will fill up a larger space than yours, and his advertisement will be spread out in the newspapers of every city in the country,—

his paltry tokens will be displayed along the dead walls of a hundred thoroughfares,—the types may be already setting up translations of his bragadocio in the newspapers of other nations.

But what is the actual, average, nature of the nostrums of the civilized world, to take them as they really are—in nothing to extenuate, nor set down aught in malice—what is their power upon the body, and their influence upon the health of the people at large? We limit our inquiry to such as are distinctively nostrums—that is, bearing no practically true statement of their constituents, and we must of course depend upon the results of chemical analysis for our information of the substances that are in them.

We will begin with "Pain Killers," one of the most harmless kinds, because chiefly of external application. Few of them are wholly inert, and most of them have a transient stimulant effect. Of *eight* of them, subjected to analysis, six were found to contain the ordinary spirit of camphor, which every thoughtful mother keeps in the house, three contained ammonia, such as any hartshorn bottle would furnish, four were charged with red pepper, all had some alcohol,—oil of sassafras was found in four of them, oil of turpentine in two of them, tincture of guaiac in two, chloroform in one and myrrh in one. One of the most successful contained, in a half dollar bottle, one-and-a-half fluid ounces of soap liniment, with one-half fluid ounce, each, of capsicum tincture, ammonia water, and alcohol,—in all, four articles of the United States Pharmacopœia. One that was sold at a dollar for a four-ounce bottle, by a Chinese doctor, who had studied many years in the Celestial Kingdom, and who visited the towns of Michigan in a gorgeous car drawn by four horses, with a company of musicians and a lecturer, consisted of camphor spirit, lavender compound spirit, ammonia water, sassafras oil, and alcohol. One made and sold in Germany, as Nature's Own Cure, a sure relief for one hundred and sixty-six different diseases consists of red pepper tincture, ammonia, and alcohol. Another, noticed since grouping the eight articles, is a Five-minute Fragrant Pain Curer that will quiet every ache within five minutes by an exact time-piece. It is a mixture of ether, glycerine, common salt, and water. A Golden Wonder, or Seven Seals, for all the ills liable to occur in this life, is a mixture of ether, chloroform, camphor, peppermint oil, red pepper, and alcohol. Nearly all of these articles are directed to be taken internally, as well as applied externally. Now almost every person would have some judgement as to how much of ammonia, or turpentine, or camphor, or ether, or strong alcohol, it would be safe to take at once, if to be taken at all in seeking relief from a violent pain, but what judgment can anybody have as to a safe quantity of such talismanic articles as "ready relief", "wizard oil", or "magic master of misery"?

A class of nostrums finding considerable sale in Michigan, is the line of Ague-cures. Of *six* of these, collected and analyzed in this State, five were found to contain the cheaper alkaloids of Peruvian Bark, that is, the medicinal principles accompanying quinine, and of similar effect, but held in less esteem, so that they are separated from quinine and sold at a much lower price. Red pepper was found in two, aromatic sulphuric acid in two, molasses or syrup in five, and wintergreen oil in one. One consisted of a thin mixture of powdered charcoal, the tinture of chloride of iron, and syrup. These articles were all extended especially to those who had found injury instead of relief from the taking of quinine and other preparations of the bark, and each was published as a new discovery.

The hopeless diseases—those dread afflictions that find no cure in the resources of science and no positive encouragement from the honest physician—furnish a tempting field to the nostrum vendor. The Promissory Cures for Epilepsy are very numerous. Of those analyzed by myself, for some years, the greater number have consisted of various disguised forms of bromide of potassium,—the common remedy for palliation of epilepsy, and one familiar to almost every epileptic and his friends. The last instance that came to hand had a little red bitter-bark, common cinchona, in fine powder, mixed with the water-solution of the bromide. The sufferer found so much relief from it that he got it analyzed so as to obtain it without paying such an excessive price as was charged for it, but the result of the analysis is likely to lessen his confidence in it. In a German report of the analyses of *nineteen* articles sold to the people for epilepsy, only four were found to contain the bromide of potassium; six contained various miscellaneous ingredients, mostly vegetable, and of little or no effect of any kind, and nine were wholly trivial and inert. One of the latter was a red-colored spirit of camphor; another was a powder of roasted acorns; another an amulet of certain seeds quilted in cotton to wear about the neck. It is noticable that four of these articles—steadily sold for years under the same name and with the same declarations, had yet underwent an entire change of composition. In one case, a powder which had maintained a steady reputation for relief of epilepsy during seventy years had been changed in its composition three times, the only constant constituent being the volatile oil of cajeput, by which it was scented. At one time it contained magnesia; during two changes it retained muriate of ammonia; and for a long while contained valerian root.

It is hardly probable that a single purchaser for any of these articles—all held at prices a hundred times above their cost—would have taken them if knowing their composition. But in the uncertainty of the unknown, in the vague and imaginary possibilities of the hidden, perhaps in a misdirection of the instructive appeal of the distressed to the supernatural for relief and restoration, the fancy of the poor and well-nigh desperate victim of an obstinate malady clings to the irrational assumptions and specious promises of the craftily worded advertisement, as to the very spectre of a chance, for recovery. Just as men driven to straits will put their last pittance into the lottery instead of the savings' bank, or as men find in their natures a temptation to venture their prospects at the gaming table, or as harrassed persons in critical times turn to the fortune-teller; so, with the better excuse of bodily prostration and nervous restlessness, against his own judgement, and suffering with a glimmering apprehension of the wholly unscrupulous character of the human harpies who practice on his credulity, the sick man tries one game of chance among *the unknown remedies*, and tries again, one more, and tries one after another. But mark you, here is a difference: the lottery-wheel, the gaming table, and the fortune-teller are fully outlawed by the common intelligence of the times, and their victims are few, but, on the other hand, the miracle-promising panaceas are not fully discarded by the current thought of the people, and their victims are very many.

Probably the most extreme illustration of what may be called the tragical side of the nostrum business is to be found in an uncovered view of the operations of the "cures for the opium habit." The writer has analyzed enough of these, and read enough of the feverish correspondence of their victims. In most all cases the articles consist wholly of morphine, disguised in colored and flavored solution. In a few cases, quinine or cinchonidine, as a tonic, is substituted for a part and at times for all of the morphine. The strength of the solution, for the same patient, changes from time to time, and changes of the tonics have been found. The operator advertises with reserve, little more than the words, OPIUM HABIT, *cure*, and his address. To inquirers, he invites a letter from the opium taker himself. When he gets this, he is ready. He sends a highly wrought pamphlet, with vivid portraiture of the power and pains of the habit, made up from the most morbid literature of this subject, intensified by narrations of the wildest experience, and toned with the most assuring sympathy. It would be enough to give a susceptible person the opium habit just to read it. Those who are but slightly addicted to opium, or invalids just beginning to depend on it, take on the impression that they are hopelessly enslaved. But the promise of cure is certain, and the certificates enough to prove charcoal to be white. The remedy is costly, but it is ordered. It comes, in fixed quantity, to last exactly thirty days, with most positive instructions to take just the required doses of the mysterious liquid, under penalty of great danger from any variation. The patient, for such he is called, begins. At first he is rejoiced that he can do without his morphine, then suspects that there is morphine in the unknown medicine and demands explanations, and makes complaints. Constant correspondence is insisted on, frankness required, and every doubt is met with decision. So the pathetic farce is protracted; on the one side, art and audacity and cold, merciless persistence, on the other side alarm and hesitation and despairing appeals, until the judgment of friends or the service of an analyst dispels the illusion, and leaves the victim to realize that he is sold to his own habit by the one whom he engaged to defend himself against it. Whether the autocrat of the opium antidote ever uses his control to diminish the supply of the narcotic, and weaken the habit, cannot be positively declared, but such cases have not been found. And for this nostrum vendor, certainly, the symbol of the spider and the fly would be too tame a trade-mark, and his own service with chain and ball not too severe a retribution.

With equal hypocrisy but with vastly less mischief, are some of the modern life-elixirs. An Elixir of Life Bitters, put up in New York, is reported from Berlin, to contain aloes, cinnamon, sweet flag, angelica-root, saffron, burned sugar, glycerine, and strong alcohol. A Swedish Essence of Life consists of aloes, rhubarb, saffron, myrrh, and roots of sedoary, gentian, and galangal, in alcoholic tincture with sugar. A German Aromatic Salt of Life, to correct acidity of the stomach, insure a good appetite, and supply all the saline elements proper to the human body, consists of baking soda, table salt, Glauber's salt, and sugar, flavored with a fragrant spirit of cinnamon, cardamon, bitter orange peel, and root of violets. This mixture is sold—for constant use with the food—at a quarter of a dollar a pound. Quite different was a Swiss Elixir of Life and Cure for Lung Diseases, found to be pure spring water, directed to be given in small doses. Also a Soothing Powder, presented, with careful directions for sparing use, to quiet the nerves, was found by Hager to be pure rice starch. The Wondrous Salt, for a number of particularly designated diseases, was a fair grade of saltpeter, and a notorious Renovating Resolvent, that has fastened its alliterating trade-name before our faces, the analyst finds to be a sugared extract of ginger and cardamon. A Nerve Balsam consists of alcohol with essential oils of lemon and bergamot; a Nerve Spirit, of alcohol with oils of lavender and rosemary. A "Golden Medical Discovery," and a "Favorite Prescription," companion catch-words of enforced familiarity in two hemispheres, have flourished just as well since both their analyses were published, five or six years ago,—the former consisting of laudanum, lettuce-extract, honey, and very raw whiskey; the latter, of savine, agaric, opium, cinchona, cinnamon, anise oil, gum arabic, and alcohol.

The cosmetics on the market are mostly given without a proper statement of their ingredients, and, while many of them are harmless, many others contain substances that are injurious to the skin and to the system, substances so well known in the common information of the public that nobody would use them if their contents were declared. Among the liquid cosmetics—the lotions for ladies' use upon the skin—coming from time to time to analysis under the writer's observation, every little while there comes an exceptional one charged with corrosive sublimate. Some of these are clear solutions, some of them have a white powder of chalk or terra alba settling to the bottom, one of them had a white sediment of calomel (the insoluble chloride of mercury); most of them are delicately perfumed, a few are without odor, certain of them date from Paris and have labels in French,—but they are alike in having the worst constituent of all cosmetics, for the corrosive chloride of mercury is rapidly absorbed through the skin. Some years ago, a collection of *twelve* cosmetics—lotions and powders—from the drug-stores of Ann Arbor were found to be all innocent of mercurial or lead compounds. Three of them contained bismuth, as sub-carbonate or as "pearl white" (oxychloride); three contained zinc white; eight had chalk; seven had terra alba and five had magnesia. Not less injurious than the corrosive sublimate, if long used, is the "white lead" put in some of the face-powders. A week or two since, a middle-aged woman, of intelligent address, applied for treatment at the University, and was found to be suffering under a paralysis unmistakably resulting from lead-poisoning. As she had not been engaged in contact with the manufacture or use of lead paints, there was some perplexity as to the case, when inquiry was made about her use of cosmetics. Yes, she had used a certain "flake-white", for a long time, for thirteen years, getting it at different places wherever she had called for it. Then a portion was obtained from her, and on analysis was found to be wholly carbonate of lead, a levigated article of white lead. A celebrated French actor died in 1875, from lead poisoning due to use of lead colors in oil, in making up his face for the stage. It is to be supposed that everybody is well enough warned about Hair Dyes, apt to consist of sugar of lead, or nitrate of silver, and the Hair Restorers are of the same sort. Two years ago, a New York chemist, Mr. Benjamin, reported on *twentg-one* Hair Dyes and Restorers. Six of these were harmless, and fifteen were poisonous, all containing lead. In conversation with an eastern dealer in chemicals, a few days ago, he remarked that there was beginning to be a considerable demand for peroxide of hydrogen. It would be a very useful disinfectant, but it is too expensive for that purpose. It is mostly used for the hair—in favoring the preference for blonde colors—and its expensiveness does not lessen its demand for this use.

In certain lines of nostrums, for diseases readily amenable to remedies or palliatives, there are found a considerable number of standard and efficient medicines. Of Cures for Asthma and Catarrh, an analysis of *six*, found belladonna and nitre in two, both to be used as fumigating pastiles, another pastile consisted of nitre and sawdust with aromatics, one used as a snuff contained tobacco and asarabacca, another, a standard one, contained camphor, carbolic acid, golden seal and common salt colored with prussian blue, while one for inhalation contained carbolic acid, camphor and wintergreen oil. This last was entitled "carbolate of iodine", and was the only one of the six that made specific mention of any consituent, but the preparation did not contain iodine at all. The name contained the iodine, and in all nostrums the name is the principal thing.

Two years ago a collection of *eight* specific nostrums for rheumatism, on sale in Detroit and Ann Arbor, were subjected to analysis at the University. Salicine, now much used by physicians in treatment of rheumatism, was found in three of them, iodides in two of them, and alkaline acetate, colchicum, and nitre, each, in one. One, in pill form, contained only red pepper, liquorice, and sugar; and one, in a cochineal-colored solution, held only alum and common salt. Of the eight, only one made declaration of any ingredient, and this one did contain the substance by which it was entitled. One of them claimed to be charged with electricity combined with essential oils; oil of origanum and oil of tar were found, but the electricity must have evaporated before reaching the analysis.

Three years ago Professor Richter published a summary of nine hundred and thirty-eight secret remedies, analyzed by himself and other chemists. Of these he found twenty-two per cent. having some violent or poisonous constituents, twenty-five per cent. having medicinally powerful constituents; fifty-two per cent. having only harmless or inert constituents.

It is the claim of the publishers of the secret remedies, that they consist of newly discovered articles, not in general use by physicians, but only to be obtained in the nostrums offered. The public are impressed with the assertion, from each nostrum in its turn, that it contains articles not embraced in pharmacopœias, nor in current use among domestic remedies. These claims of originality are flatly contradicted by the results of analyses, and the analyses have been very extensive. The constituents found, so far as they are such as to have any action on the system at all, are those of common use, well known, not only to physicians but to most persons of ordinary information. As to the quantities of the medicinal ingredients, in the dose directed, these are very irregular, and in few cases are they in true and efficient proportion.

It is particularly to be observed that the composition of a nostrum may be radically changed while it is steadily before the public under the same name and description. Several instances have been given in the brief categories which this occasion permits; and numerous others have been already revealed by analysts. A noted soothing syrup for children at one time was reported by at least three several analysts to contain morphine; of late years the same advertized nostrum as mostly sold contains no morphine, but only some oil of fennel. It is very clear that to a patent-medicine proprietor, the name and notoriety are everything, the ingredients and their proportions are very little, either in cost or consequence. He invests thousands in notoriety of a trade-mark, he secures it by copyright, it is his main investment, he may sell it or hold it, he may try to strengthen his investment by altering his nostrum so as to give it some popularity on its own merits, and in this alteration he may experiment, or he may be ready to realize on his investment the utmost profit, by further cheapening its cost, and see how long it will run without any present merit of its own. The nostrum maker fills his bottles behind closed doors, but he has published his name over the continent, at great expense, and it is *the name* that people are to buy, and take three times a day, and depend upon when dread disease is staring them them in the face.

It may be submitted, now, that *the use of patent medicines without a knowledge of their composition does injury to the health of the people:*

(1) Because they may, and in fact sometimes do, contain powerful or poisonous articles, unsuspected.

2 Because they always may be, and often are, inert, and become a false reliance, to the neglect of other and due measures in the care of health.

(3) Because they are liable to be changed in composition, so that any experience of their effects, as they are purchased at one time is not conclusive as to the same named articles purchased another time.

(4) Because it is submitting health to the treatment of a distant and irresponsible stranger, and learning to hazard health in an apparent game of chance.

(5) Because they are trusted to act as antidotes to disease in the sense in which no medicines can antidote disease.

(6) Because they favor excessive recourse to medication, and thereby increase the resort to physicians and intensify the demand for the physicians to give medicines whether needed or not.

(7) Because their analysis shows the greater part of them to be given with multiplied falsehood, and the patronage of falsehood must be demoralizing both to the mind and to the body.

Before considering how to stem the tide of this evil, let it be fairly seen that there is a legitimate demand for domestic remedies, to be used without the advice of physicians. Some medicines people ought to have in their houses. Still others people will obtain for disorders as they arise, and take them on their own responsibility. Undoubtedly they do this to an extent greater that is good for them,—but that is no part of our present subject. There is little question but that people are disposed to take too much medicine, and physicians are inclined to give too much medicine. Physicians are learning to treat diseases with less and less medicine, and learn the lesson a good deal faster than the people learn it. The people must have time to be taught the limitations of specifics, and, therefore let the people be well provided with standard remedies, just so far as they wish to use them. The United States Pharmacopœia has from time to time added preparations to supply the call for household medicines. There are many such, for various uses, in every drug store. Let physicians of all sorts contribute them. But let it be indispensable that every article is labelled with its distinctive name. If it is a preparation not having an acknowledged name, let its formula of constituents be put on the package. The names should be in the best authorised terms, with popular synonyms when these will be sooner understood. The simple scientific name, in English form, is the best term to use. If the elderly people understand a certain substance best under the name of "nitre" or "saltpeter", the rising generation will know it better as "nitrate of potassium". For plants, the Latin names, in language of botany, are of first importance, but popular synonymes can be added. However, one who cannot understand any botanical, or scientific, or Latin name, has but to consult a dictionary or ask interpretation of the nearest school teacher or of the druggist. Any term becomes popular if used. Only let every article that any body is to buy and use as a medicine be a preparation or mixture not of official composition, let its constituents and their proportional quantities be given, fairly and squarely. Let it come to be known that people will not buy things to take, unless their contents are defined.

We would like to go a step further, we would at least discourage, if not now utterly discountenance, the putting of the names of any diseases on any packages of medicine. Is it an objection, that many people would not know, by the medicinal name, what disease the article was good to cure? Then by whom are they to be informed? Who is to assure the purchaser that the contents of the package will be useful for the infirmity? Shall it be any man who gets advertisements put on the fences? Indeed general statements of whatever authority still leave the question to be decided by the patient and his friends. If he is to get advice, he ought to get the best. And it would be hard to obtain any credible medical authority to write down what diseases an article of medicine would be invariably good for. Still if any honest persons can be induced to specify some names of diseases to be indicated in a secondary way on certain packages of medicine, let so much be granted in compromise—but it must be insisted upon that the medicinal name be placed the first.

And now if it be in the main quite true, that the use of nostrums is a source of positive injury to the public health, and a vitiating and wasteful absurdity, how are the people to be helped to get rid of the burden? Accepting the diagnosis, what should be the treatment?

Well, in the *first* place, begin the work of common sense in the public schools. Teach physiology, the structure of the vital organism and the cause and effect of health and disease, teach the rudiments of chemistry and botany if you will, but let the next generation know that it is the body and not the disease that is to be treated, and that universal panaceas are relicts of superstition. Cultivate a stalwart physical independence, and a scrupulous prudence in the treatment of bodily infirmities. Security from charlatanism is dependent upon the intelligence of the people. In view of the indiscretion of this generation, it seems to be high time to look to the training of the next. This is the surest measure, aye and the quickest, that can be adopted.

In the *second* place, let the actual composition of nostrums, as found by analysis, be more fully published among the people. Enough of the marvelous mixtures have been and are being analyzed to more than establish the prevailing imposture and absurdity of the entire class. The results ought to be spread before the people. A few years ago a prominent pharmacist of New York began the publication of a health almanac, chiefly devoted to the revelation of the contents of current nostrums, and the undertaking ought to have been supported. In the German language there are, among other sources of information, two compact dictionaries* of analyses of modern nostrums, including the chief ones made in this country—those sold abroad. Analysts report upon nostrums, at the cost of no little labor and time, and more reports should be made. Ask your druggist to make analyses of such as are finding the most patronage. A good many pharmacists, at present, are competent to make chemical analyses, inorganic and organic, with microscopic examinations, and all the pharmacists of the future should possess this qualification. No profession of men receives greater detriment from the nostrum trade than the dispensing druggists. The most of them consent to sell these things, as they do all medicinal appliances called for by any body. If they did not keep them for sale, their customers would think their assortment very incomplete. In the larger cities, a few pharmacists keep no nostrums, and these are encouraged, or ought to be, by a better support from the people and the physicians. But the "patent-medicine" proprietors, to whom the profits chiefly go, will find their own ways to put their wares in reach of the people. All the journals and other established organs, both of pharmacy and of medicine, totally repudiate secret remedies, but so long as the people are in the condition to be duped, nostrum venders will fatten on the opportunity.

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*Wittsteins' Geheimmittel-Lehre, Nördlingen, 1876. Hahn's Geheimmittel, Berlin, 1876.

In the *third* place, it would be altogether an equitable measure, to enact a law requiring all articles of medicine to be marked with their distinctive and established names, and all preparations for medicinal use to bear a statement of all their constituents in terms of the quantity of each. Let secret remedies be contraband of trade. Leaving every man to buy what he will, and use what he will, on his own responsibility, whether he knows anything about it or not, let the law interpose to prevent fraud. It is contrary to the spirit of the common law to admit the sale of a chance, or of an article represented to be something other than it is, or of uncertain weights and measures. To make regulations to stop an extensive class of deceptions is certainly within the scope of legal enactments. Such a law ought to commend itself to the world of trade, as a measure to promote fair dealing. The nostrum maker could not plead that he suffers a loss of value from publication of his secret, for the law grants no monopoly in compositions of matter, unless they are under patent, and a patent gives no assurance of secrecy.

Such a law would be just, but would be useful no further than sustained by the information and judgment of the people. The fully awakened intelligence of the public, in this country, furnishes a support for sanitary regulations, better than that of the more arbitrary powers of European governments. With a sufficient popular basis of well-apprized common sense, a good sanitary law, more comprehensive than individual action, brings conclusive results. And indeed, with law or without it, the baneful body of the nostrum business, already swollen near to the period of collapse, may be safely trusted to fail altogether in the robust atmosphere of an enlightened people.

SUDDEN FALL OF TEMPERATURE IN A CASE OF PNEUMONIA.

BY W. J. HUFF, M. D., SAINT MEINRAD, INDIANA.

On the 10th of March I was called to see the twelve year old son of Mr. T., a German farmer living one mile from town. On making inquiry the father informed me that the boy had been sick a week. Was taken with a chill while at school and had fever ever since. I found his temperature 105° Fahrenheit; pulse 130, full and strong; respirations 65 per minute; face flushed and dusky; tongue coated and fissured, but moist; bowels moving freely from a cathartic administered by the parents; pain in the right mammary region; slight hacking cough. On making examination, fine crepitation was observed in the right lung from base to apex showing the whole organ to be involved. The left lung was apparently normal; Urine scanty, high colored, and of high specific gravity. Diagnosed pneumonia. Prescribed the following:

℞. Potassii Citratis.................................. ʒii.
Spt. aetheris nitrosi......................... ʒiv.
Tr. veratri viridis.............................. gtt. x.
Aquae puræ....................................... ℥iv.
M. Sig. Tablespoonful every two or three hours.

Also ordered a mustard plaster to be applied to the chest in the region of the pain.

March 11, 8 o'clock A. M.: Patient perspiring freely but temperature remains at 105°; pulsations 125; respirations 60; pain less severe. Continued the above mixture and ordered

℞. Quiniæ sulphatis..............................
Pulv. ipecacuhanæ comp.................. āā. gr. xx.
M. Divide into four powders and give one every three hours.

March 11, 6 P. M.: Patient perspiring but no change in temperature.

March 12, 8 A. M.: Patient slightly delirious. No change in temperature or pulse except the latter is weaker. Respiration easier and 50 per minute. Free expectoration of "rusty" sputa. Treatment continued the same except the Dovers powders which were reduced to three or four grains to each dose of quinine. Ordered beef tea and milk punch alternately every two or three hours.

March 13: Visited the patient at 8 A. M. and 6 P. M., and found the pulse and temperature the same, but the thoracic pain had disappeared. Mild delirium.

March 14, 7 A. M.: On entering the room I noticed a marked change in the patients countenance. Face pale, cool and perspiring; temperature 93½°, pulsations 60; respiration 16 per minute. Patient had been wildly delirious during the night so that the nurse was compelled to hold him in bed, and was still so by spells. Diffusible stimulants—ammonia and brandy—were ordered to be given freely and the patient well wrapped in blankets.

March 14, 6 P. M.: Temperature 95°; pulse 65; patient more rational.

March 15: Temperature 97½°; pulse 70; appetite good; rational.

March 16: Temperature normal 98½°. Patient dismissed. The rapid decline of temperature from 105° to 93½° or 11½° in twelve hours, and the maniacal delirium after the fever, were the features of the case that struck me as peculiar. I took the temperature carefully in the axilla, and under the tongue, and found it the same, 93½°. I also tested the thermometer on a healthy boy to see that it was not at fault, and found it marked 98½°.

EMESIS FROM CHLOROFROM SUPERSEDES A TRACHEOTOMY.

BY DANIEL AYRES, M. D., LL. D., BROOKLYN, NEW YORK.

I have generally employed chloroform for tracheotomy and other operations, without, thus far, being much disturbed by its effects or losing a patient, and I will give you a bit of experience in its use, which illustrates how an event, disagreeable in itself, nevertheless turned out advantageous to a patient by rather ludicrously superseding an operation for croup already begun. A lad of eleven years had been for six days and nights under the active treatment of a medical friend, chiefly consisting of emetico-cathartic. The violent symptoms had all subsided, and the patient, though reduced and weak, was satisfactorily convalescing. His mother, who had hitherto most assiduously and carefully watched the boy, thought it quite safe to leave him, in order to arrange some neglected matters requiring attention. On her return, however, she found her boy wildly tossing about the bed, gasping for breath and unable to speak. Of course she was greatly alarmed, and the physician who had been in attendance, hastily summoned, was soon upon the spot and surprised to find his patient in such desperate straits. He had immediate recourse to the emetics which had already served him well—administering copiously hot water with mustard, and finally sulphate of zinc and copper in liberal doses, but all without effect. After laboring on this task for some time without gaining any response, he dispatched a messenger requesting me to come at once, and prepared to operate. The appearance which met me on arrival was portentious in the extreme. The patient was in great agony, his skin cyanosed, damp and cold; the pulse feeble and flickering. Certainly things could not look more desperate. As speedily as possibly we administered chloroform, and I had hastily made an incision through the skin, when my attention was arrested by slight spasmodic efforts indicative of emesis, and just about the last thing desirable, to an operator in a hurry, to effect an opening into the trachea. Of course the operation was suspended, and on came the vomiting. Such a liberal cataract poured from his mouth, deluging, clothing, table and floor, that it seemed as though suffocation would ensue before we could turn him on his side. The matter vomited, almost incredible in quantity, was of the most miscellaneous character. It turned out that the boy, after such thorough physicing, had suddenly acquired one of those ravenous appetites which only boys can get up under such circumstances, and was tempted to take advantage of the short absence of his mother to empty the contents of a neighboring cupboard into his stomach without wasting much time in the process of mastication. As a consequence, the stomach was so distended and paralyzed that it was insensible to all stimulation by emetics until the chloroform brought about the happy *denouement*. Whilst cleansing his neck and plastering up the cut, the patient went off to sleep, and never had another bad symptom. Recovery was rapid, and tracheotomy was cheated out of another victory, although, against all our protestations, it gained the credit of "working a miracle."

A CASE OF RANULA.

BY W. H. SMITH, M. D., PH. D., SAINT CLAIR, MICHIGAN.

On February 12, Miss L. Y. called to see me in regard to something growing under her tongue and upon her neck. The history of the case, as related, showed that about four years previously a sublingual growth appeared in her mouth, when she consulted a physician who diagnosed cancer and treated it with caustics. Afterwards she visited an eclectic quack who proposed to remove the thing by internal medication. A second representative of that school was then seen, and still later a third living in Port Huron, but notwithstanding all these learned (?) gentlemen's endeavors the tumor remained and increased in size. The next step was to consult a homœopathic doctor in Port Huron who proposed to cure it, by injecting tincture of iodine into the center. It was accordingly injected a number of times by means of a hypodermic syringe, but failed to disappear under this treatment, possibly owing to the fact that the little pill man had not succeeded in finding the *similimum.*

At the time of consulting me, the patient had about lost confidence in doctors and nearly abandoned all hope of obtaining relief from her trouble. Having paid each of the preceding gentlemen a fee to no purpose, she felt that any additional expenditure of money looked very much like throwing it away.

However as fluctuation was evident and the diagnosis of ranula made without difficulty, she was assured that the thing was in all probability curable, and an operation strongly recommended. She finally assented, and on February 16, chloroform was administered by Dr. Padfield, when I made a free incision into the cyst upon the neck and under the tongue. After evacuating its contents, lint was stuffed into the opening upon the neck in order to maintain drainage. This was changed daily until the wound healed from the bottom, obliterating that portion of the cyst. The incision in the mouth closed before the contents of that part of the cavity were fully evacuated, and it was afterwards reopened and a probe passed daily. Nevertheless the external opening was disposed to heal without obliterating the cavity of the cyst. To prevent this the tincture of iodine was injected and with success. The adhesive inflammation thus produced caused the obliteration of the cavity, and on March 5, the patient was discharged completely cured of her ranula.

The lesson of the above case is obvious. Here was a patient, with a trouble well defined in works on surgery and its treatment plainly indicated, imposed upon by pretenders to medical knowledge. The fact that she was first seen (probably before the nature of the growth was plainly apparent and when error in diagnosis was possible) by a person who holds a diploma from a reputable medical college does rnot render the quackery of the others any the less objectionable. The case is not only of value in indicating the necessity of a law regulating the practice of medicine in the State, but also as suggesting how some so-called "cancer cures" may be effected.

EDITORIAL BRIEFS.

The presiding genius of *The Michigan Medical News* says that he cannot understand a certain sentence occuring in Professor Huguenin's article in the March number of The Physician and Surgeon. He makes many suppositions concerning the meaning of the sentence, suggests various ways in which it should have been written, and concludes by saying: "There must be more in it *that* we can see." Had he said "there must be more in it *than* we can see," it would have probably been nearer the truth.

A new branch of chemical instruction was mentioned the other day in a conversation between an applicant for admission to the chemical department and the examiner:

Examiner: Have you studied chemistry?

Applicant: Oh yes. I took a full course in ——— College.

Examiner: What was the nature of the course?

Applicant: First, we had a course in *theatrical* chemistry.

Examiner: Theatrical chemistry! That is something new. Did you study the methods of producing variously colored lights?

Applicant: No. We had problems to solve.

Examiner: What text did you use?

Applicant: Barker's chemistry.

About this time it became evident to the examiner that the student had heard some one speak of *theoretical* chemistry and the applicant was advised to review his "theatrical chemistry."

Value of a Knowledge of Botany to the Therapeutist. —*The British Medical Journal* summarizes an article, written by Professor Spalding, as follows:

"In a recent number of the American *Therapeutic Gazette*, Mr. Spalding, the professor of Botany in the University of

Michigan, contributes an important and interesting paper on the active properties of plants considered as a feature of relationship. Recent investigations have shown that experiments in therapeutics might be instituted, with much greater chances of success, by attending to certain facts of relationship familiar enough to botanists, but little studied by those engaged in the active practice of medicine. There is reason to believe that botanical relationship indicates, and more or less perfectly defines, the active properties of plants. A study of a few familiar natural orders will illustrate this proposition, and may, perhaps, prove of practical value in reducing the number of fruitless therapeutic experiments by suggesting a reasonable basis on which to conduct such investigations.

"First and foremost in our manuals of botany, we find the ranunculaceæ or crowfoot family, an order of highly developed plants, of clearly defined form and structure, and of marked physiological properties. The species belonging to this family are, with but few exceptions, acrid and poisonous, and many of them yield active principles which are of daily and hourly use in the treatment of disease. Thus the Aconitum napellus, aconite, wolfsbane. or blue rocket, is of inestimable value in febrile affections. The black hellebore, famous, or rather infamous, from the remotest times, possesses powerful narcotic and irritant properties, and has often proved fatal when accidentally administered. The seeds of the various species of larkspur are sufficiently active to render them efficient vermicides. The cholagogue properties of podophyllum are well known; whilst the hydrastis Canadensis, or golden seal, with its resin hydrastin, is coming largely into use, and is likely to occupy a permanent place in our list of remedies. The pulsatilla or anemone, and the actæa, exert a powerful action on the uterus; and, in America, are generally employed by the obstetrician and gynæcologist.

"Passing by without special notice a number of smaller orders, we come to the cruciferæ or mustard family, represented by mustard, scurvy-grass, radish, cresses, and various other well known pungent herbs, constituting a decidedly marked family of plants, whose active properties are no less uniform than the cruciform tetradynamous flowers which indicate at a glance their botanical relations. There are no poisonous plants in this order, but all its representatives are characterized by the presence of a pungent juice, mild enough in the various cresses to produce an agreeable salad, but much stronger, and mixed with a powerful volatile oil, in horse-radish, mustard, and others, imparting to them decided antiscorbutic and rubefacient properties. So uniformly are these pungent properties present in plants of the mustard family, that their action may be calculated upon with certainty. This fact has several practical bearings. In the first place, it is not improbable that many more species of the family will be found to have a definite therapeutic value; as, for example, the common herb, shepherd's purse, which has recently been favorably noticed as a diuretic. On the other hand, these same properties may occasion very deleterious effects; as, for instance, when even a small percentage of the seeds of any species of this family is introduced into linseed-meal when employed as a demulcent.

"Passing on to another natural order, we find the mallow family distinguished for their mucilaginous properties. The demulcent action of althæa root has brought it into very extensive use; and its properties are shared, to a very great degree, by other species of the order, among them the hollyhocks, which are sometimes substituted for it. The root of the cotton plant, however, appears to be exceptional in its action, producing effects which have been compared to those of ergot, and believed by some to be quite as efficient. So marked a case shows plainly that, permanent and uniform as family characters may be, they cannot be followed blindly. As with all rules, prominent and undoubted exceptions occur.

"The cucurbitaceæ or cucumber family, distinguished botanically by its gourd-like fruits and climbing habits, is noted therapeutically for an acrid, bitter, purgative property, which renders many of its species drastic cathartics. Citrullus colocynthis, the "wild vine" of the Old Testament, and the "bitter apple" of the Materia Medica, possesses such properties to a remarkable degree, even the dust inhaled in handling the dried pulp revealing the intense bitterness of the fruit. The white bryony root of Europe, and the elaterium of the *British Pharmacopœia*, derived from the squirting cucumber, are both violent cathartics, and in over-doses poisonous. Luffa purgans, and luffa drastica, sometimes called American colocynth, are also violently purgative. However much the acrid purgative properties of plants of this family may become diffused and modified under cultivation, its species can never be entitled to perfect confidence. Green cucumbers, for example, are usually harmless enough, but the "old bitterness" in their nature is liable to reappear in unaccountable reversions to the ancestral character.

"The solanaceæ constitute a large and important order. Narcotic properties are exhibited by most of its species, though it is also the source of some of our most useful food-plants. Belladonna, stramonium, hyoscyamus, duboisia, pituria, and tobacco, the sources of such principles as atropia, daturia, hyoscyamia, and nicotia, have exercised a potent influence on the human family; whilst the common potato, solanum tuberosum, has contributed in no small measure to its maintenance. This last species shares, to some extent, the narcotic and poisonous properties of the family; but the tuber, being merely a receptacle for starch, does not develop these unless exposed to the light. The stalks, leaves, and unripe fruits of the potato produce an active principle, apparently very powerful, which has not been fully investigated.

"Several other orders well worthy of critical study must be briefly noticed. The labiatæ are aromatic and stimulant; spearmint, peppermint, pennyroyal, sage, lavender, rosemary, and a host of other familiar examples, serving as illustrations. Wood betony, betonica officinalis, is coming largely into use in America, and is said to be one of the most active of the new remedies.

"Of the fungi, a large number of species have taken a prominent position as medicinal agents, notably the claviceps purpurea, the ergot of rye, ustilago maidis or corn-smut, and the agaricus muscarius or fly agaric. Here, too, belong the various ferments, such as ordinary yeast and others, not to mention the host of disease "germs", whose life-history and physiology constitute one of the great problems of modern science.

"It will be seen from the study of a number of orders selected from the principal classes of plants, that active properties are often a marked and reliable feature of relationship; and that they constitute, in such cases, a family character nearly, or perhaps quite, as distinctive as the structural characters upon which the union of various species into families is at present based. A more careful and exhaustive study of all the leading orders from which therapeutic agents are derived, by the light of these principles, must, it would seem, result in eliminating a portion at least of the uncertainty under which new and often valuable remedies struggle into recognition, and in ruling out more promptly the worthless species that are so often suffered for many years to encumber our Materia Medica."

CORRESPONDENCE.

MICHIGAN STATE BOARD OF HEALTH.

Reported for THE PHYSICIAN AND SURGEON.

The regular quarterly meeting of this Board was held at Lansing, Tuesday, April 12, the following members being present: Rev. D. C. Jacokes, of Pontiac; Henry F. Lyster, M. D., of Detroit; Arthur Hazlewood, M. D., of Grand Rapids; and Henry B. Baker, M. D., Secretary.

Dr. Lyster was elected President *pro tem.*

A letter from Professor Kedzie, President of the Board, announced his decision to decline the re-appointment as member of the Board, for the reason that his duties as Professor at the Agricultural College were such as, in the opinion of members of the board of agriculture, would prevent his giving that attention to the work of the Board of Health which he had heretofore done. His communication outlined the great progress in public health measures in this State since the organization of the State Board of Health eight years ago. He saw with pride that nearly every city, village, and township in the State now has its board of health and health officer. Kerosene explosions, so common eight years ago, have forever been banished. Everywhere in the State there is evidence of an advance in the stamping out of infectious diseases. The ventilation of churches, schoolhouses, and dwellings now receive an attention never known before. The water in our wells, the drainage of farms, and the sewerage of houses have all been brought into prominence by the labors of the Board. In this work the Board had been greatly assisted by the public press, but the press itself has been stimulated by the work of the Board. In short there has been a general advance along the whole line, but we have kept such even step in this advance that we only become aware of our changed position by comparison with the landmarks of eight years ago. Last, but not least, among the agencies set in motion for the public health, he noticed the sanitary conventions for discussion with the people of all matters relating to their physical well-being. He believed they were fraught with inestimable good to the people of our State. The forces which are thus set in motion are not temporary in their influence, but will flow on in a stream of blessings to the end of time. The information gathered by the Board needs to be scattered broadcast among the people. New and original investigations into the nature of contagious diseases, and the means for arresting them, need to be undertaken and pushed forward by the Board. The information gathered will be of small benefit if imparted to only a few. The State cannot afford to hide this light under a bushel,

In bidding farewell to the State Board of Health Dr. Kedzie gave the assurance that he did so with the kindliest feelings toward all its members, and with an earnest wish for its highest prosperity and usefulness.

Resolutions were passed expressing extreme regret at the necessity which compelled Dr. Kedzie to decline to serve longer with the Board; also, expressing the high appreciation of the Board for the eminent labors of Professor Kedzie in the interests of the public health of the State. The election of his successor as President was postponed until the next meeting of the Board.

THE FILTH OF OUR CITIES.

The Secretary presented a communication from C. H. Voute, giving statistics of the filth removed from privies and cesspools in various places in the State by means of the odorless excavating apparatus. During the time—about a year—the number of tons removed, is, approximately, as follows: East Saginaw, 850; Bay City, 580; Lansing, 93; Charlotte, 61; Jackson, 151; Ionia, 78; Flint, 118; Battle Creek, 60; Kalamazoo, 258; in the

State about 2,300 tons, or 15,000 barrels, and of that amount but 2,000 barrels could be pumped out, the remainder being removed by the "pitting" process, showing the liquid portion had mostly drained off into the soil, which must be much saturated with filth, and as a consequence many wells must be contaminated.

OIL INSPECTION.

Communications had been received from different parts of the State, stating that it was customary for deputy oil inspectors to inspect a few barrels of oil from a carload and brand as "approved" and collect pay for inspecting the whole carload. One of the statements was that the inspector did not test every barrel even when his test showed at least three different grades of oil in the carload. The questions were. whether this was an honest fulfillment of the law, and whether the public safety is thus conserved. The Secretary was directed to take action for ascertaining.

SICKNESS CAUSED BY PUTRID MEAT.

A letter was presented from John Mulvany, M. D., surgeon in the British navy, detailing the effects of food rendered unwholesome through putre-factive taint. All of the crew of a large merchant vessel that put into the Falkland Islands, who ate of pork opened on a certain day became ill, and the illness continued until the ship was disabled and medical assistance was sought for in the Falkland Islands. There it was found that not only the pork but the beef was bad, and the meat was condemned by the board of surveying officers. Seven of the affected died, and postmortem examination revealed immense effusion into the pericardium, a stench from the brain and congestion at the point of the calamus scriptorious in the fourth ventricle, with congestion of the jejunum and ilium. During life the chief symptoms were paralysis of the hands and feet, and agonizing pains in the toes; uncontrollable sleeplessness, loose bowels, stench from the skin, etc. Symptoms entirely *sui generis*.

The Board requested Dr. Mulvany to present a complete account of the sickness.

DISEASES OF ANIMALS.

A letter was presented from A. J. Murray, V. S., Secretary of the State Cattle Commission, relative to the desirability of collecting statistics of deaths from contagious diseases of animals in all parts of the State. This work might properly have been done by the State Cattle Commission, if it had any funds, but a bill granting them an appropriation of $500, which was passed by the senate was defeated in the house of the present legislature.

Letters were also presented relative to glanders in Clinton and in Shiawassee counties.

SANITARY CONVENTIONS.

Invitations to hold sanitary conventions during the coming winter were accepted from Coldwater and Ann Arbor.

DETROIT BOARD OF HEALTH.

Dr. Lyster, chairman of the special committee of the Board, to devise a plan for a board of health for the city of Detroit, reported that he had in consultation with the city attorney and other citizens drawn up a bill providing a practical and a scientific board of health for that city, and the bill was now before the legislature.

SANITARY SCIENCE EXAMINATION.

The annual examination of applicants in sanitary science will be held Tuesday, July 12, 1881; it was voted that the examination should be written and that each member should submit ten questions not heretofore asked, and on subjects connected with their work as regular committees. Candidates successfully passing the examination will receive certificates that they are qualified to act as health officers in any city, village or township in the State.

CONTAGIOUS DISEASES.

It was decided to print revised editions of the documents on the restriction and prevention of each of the three diseases, diphtheria, scarlet fever and small-pox. Arrangements were also made for the translation of these documents into the Holland and German languages.

"WINTER CHOLERA."

The secretary reported the prevalence of a peculiar type of diarrhœa in some portions of the State during the past winter. The fact of its greater prevalence in the southern portions of the State, and that cases have been reported from two State institutions and from towns in the northern part of the State, dependent upon Chicago and southern Michigan for their food-supplies might indicate a connection between the sickness and the use of oleomargerine, butterine, products of diseased pork, or meat, or other food.

The next regular meeting of the Board will be Tuesday, July 12, 1881.

TRANSLATIONS.

Translations from Russian Journals for THE PHYSICIAN AND SURGEON.
BY RALPH D'ARY, M. D., ROMEO, MICHIGAN.

SURGICAL AID IN OBSTRUCTION OF THE BOWELS.

Owing to the favorable results of ovariotomy and Listerism, the desideratum of ancient and modern surgery—the possibility of successfully laying open the abdominal cavity in order to mechanically disentangle the intestines and remove obstructions—has gained a new importance and definite direction. The subject has of late been discussed by the Paris Surgical Society, and the conclusions arrived at were in favor of immediate interference: "If you cannot reduce a hernia, do not leave your patient, but proceed at once to perform herniotomy. Likewise: When you have with certainty diagnosed intestinal obstruction, lay open the abdomen, look for the obstruction and remove it."

The regular and rational treatment of intestinal obstruction is an acquisition of the present century, and is based principally on the results of pathologico-anatomical research. Rokitansky was the first to show that intestinal obstruction may result from the following causes: (1) From improper position of the bowels, such as invagination, twisting, or a bending at too sharp an angle, and also from abnormal conditions of the valves. (2) From compression by exudative bands, forming pathological rings; from internal hernia, or abdominal tumors. (3) From accumulations or impaction of foreign bodies or fecal matters. (4) From narrowing of the lumen of the bowel, especially in consequence of cancer.

The causes of obstruction having thus been definitely determined, clinical medicine has endeavored to establish a positive differential diagnosis of these various conditions, and it has succeeded, at least to some extent, so that we may expect, in the near future, that the operation of laying open the abdominal cavity in these cases, will become a regularly accepted one, as it is already in ovarian disease. The hesitation of surgeons to perform this operation is no doubt largely due to the fact that some cases of apparent intestinal obstruction have recovered without operation, and to a desire first to try other means, such as insufflation of air, production of carbonic acid gas within the bowel, large doses of coffee (to increase peristaltic action?), cathartics, electricity, etc., and also to the uncertainty of the diagnosis. It has happened that neuralgia of the kidney or liver, or lead colic, or even acute poisoning have been mistaken for obstruction of the bowels. Also circumscribed peritonitis with transient muscular paralysis (which also may occasion vomiting, pain, meteorismus, and constipation). A few hints, in this direction, may therefore be of some use:

General peritonitis very rapidly produces meteorismus, the enlargement of the abdomen is uniform over all its surface, the escape of flatus is not wholly prevented, and after the cessation of the introductory rigors the temperature of the body rises, whilst in obstruction it falls below the normal degree, and *never* rises above it.

The diagnostic signs of the cause or mode of the obstruction, however, are not yet sufficiently well established, to enable us, previous to the operation, to determine or locate it with certainty.

Sometimes the location of the pain coincides with that of the enlargement, and in that case clearly indicates the place of the obstruction; but frequently the pain is not felt at the place of obstruction.

The location and appearance of the meteorismus is rather important. When it occupies the periphery, and not the middle of the abdomen, the obstruction, (invagination, etc.,) is presumably located in the lower part of the large intestine. If, however, the periphery of the abdomen is flat, but the center elevated and conical, there is reason to suppose that the obstruction exists near the termination of the small intestine. When the *right* side of the abdomen is considerably more elevated than the left one—the obstruction should be looked for in the transverse colon. Examination of the rectum by the finger or probe, or injections of water combined with auscultation of the abdomen may also give important results.

The character of the pain sometimes indicates the cause of obstruction; when the pain is acute and develops rapidly, suddenly, there is reason to suspect flexion of the bowel upon itself at an acute angle; twisting, internal incarcerated hernia, etc. When, however, the pain is chronic, or develops gradually, it generally is a sign of a tumor, adventitious growths, and, more frequently, of cancer of the intestine. Chronic obstruction occurs more frequently on the left side; acute obstruction, on the right.

Abdominal section should be undertaken, as a rule, only in acute, sudden obstruction, when we are certain that the cause is really a mechanical one, and that it is not a case of inflammation simply.

Sometimes it is possible to diagnose the nature of the obstruction. Thus in children it is most generally invagination, and located in the descending colon. Diaphragmatic hernia may be diagnosed by its location, and a previous wound of the diaphragm. Exudative bands cannot arise without previous peritonitis.

Obstructions caused by tumors or foreign bodies, require opening of the abdomen, or the establishment of an artificial outlet, by colotomy. This operation is frequently resorted to in cases of cancer of the rectum.—Translated in abstract from *Sovr. Med.*

BOOK REVIEWS.

LECTURES ON DISEASES OF THE NERVOUS SYSTEM, ESPECIALLY IN WOMEN. By S. Weir Mitchell, M. D., Member of the National Academy of Sciences; Physician to the Orthopædic Hospital, and Infirmary for Diseases of the Nervous System, etc. Cloth; pages, 238, with five plates. Philadelphia: Henry C. Lea's Son & Co., 1881. For sale by S. C. Andrews, Ann Arbor.

This is an interesting little treatise on a very interesting subject. Dr. Mitchell has long been a recognized authority on the subject of diseases of the nervous system, and the pleasant style in which the book is written, makes it doubly valuable.

The lectures are thirteen in number and embrace the following subjects: (1) The Paralyses of Hysteria, (2) Hysterical Motor Ataxia—hysterical paresis, (3) Mimicry of Disease, (4) Unusual Forms of Spasmodic Affections in Women, (5) Tremor-Chronic Spasms, (6) Chorea of Childhood, (7) Habit Chorea, (8) Disorders of Sleep in Nervous or Hysterical Persons, (9) Vaso-Motor and Respiratory Disorders in the Nervous or Hysterical, (10) Hysterical Aphonia, (11) Gastro-Intestinal Disorders of Hysteria, (12) The Treatment of Obstinate Cases of Nervous Exhaustion and Hysteria by Seclusion, Rest, Massage, Electricity and Full Feeding.

The two lectures upon "Mimicry of Disease" contain many interesting and very valuable reports of cases. "Chorea of Childhood" is shown to be most frequently observed in March, and it bears a strikingly close relation to the number of cloudy and stormy days. The tendency of chorea to return in the spring should lead the physician to exercise special care over these patients at this time. Dr. Mitchell has frequently found that the administration of arsenic as spring begins is of value as a means of preventing the return of chorea. It is essentially a disease of cities, the larger cities of the North and South furnishing cases in about the same proportion. Chorea is much rarer in the negro than among the whites.

In treatment the author places much stress upon Massage. He says: "Massage is, in these cases, absolutely essential; electricity is very desirable; but we can, in many cases, do without it." The author is here speaking of the treatment of nervous, exhausted and hysterical women.

Every part of the volume is replete with material of great value to the physician.

AN ELEMENTARY TREATISE ON PRACTICAL CHEMISTRY AND QUALITATIVE INORGANIC ANALYSIS, SPECIALLY ADAPTED FOR USE IN THE LABORATORIES OF COLLEGES AND SCHOOLS, AND BY BEGINNERS. By Frank Clowes, D. Sc., Lond. Fellow of the Chemical Societies of London and Berlin; Fellow of the Institute of Chemistry; Senior Science Master at the High School, Newcastle-under-Lyme; Late Science Master at Queenwood College. With Illustrations. From the Third English Edition. Philadelphia: Henry C. Lea's Son & Co., 1881.

This book is especially intended for the practical part of the student's work, to serve him as a guide in the laboratory. All theory is rigidly excluded, except in so far as is absolutely necessary to the proper understanding of the manipulations, and its internal arrangement is such that it admits of the adaptation of the student's reading to his special requirements, whether they be those of the most limited elementary dimensions, or of a more advanced grade. It is divided into seven sections, and we could not better commend the arrangement than by laying it before the reader:

"Section I is adapted to impart experience in chemical manipulation and to afford practical illustrations of the elementary portions of theoretical or descriptive chemistry; it may be omitted when instruction in analysis only is required.

"Section II treats on the preparation and use of apparatus required in analysis. It is indispensable.

"Section III is also indispensable to the student of analytical chemistry, but if his time be *very limited*, he might omit the experiments and merely read through the text.

"Section IV must be carefully worked through. A student whose time is limited might, however, simply try the reactions and omit the performance of the analyses at the end of each group.

"Secton V is intended for students whose object is only the analysis of simple salts, such as is required in many modern examinations on practical chemistry. 'This section might also be used as an easy beginning in analysis, and as an introduction to more complicated analyses to be made in Section VI, or it may be passed over by the student who is intending to learn *general* analysis.'

"Section VI is not required by a student who is learning only the analysis of simple salts, but should be carefully worked through by the student of general analysis, who may then pass on to quantitative analysis or to any special branch of practical chemistry he may require.

"Section VII describes the apparatus and chemicals required for the preceding course."

We see from the above that the arrangement of the text is such as is sure to render the work a special favorite with every student, the more so since every page shows the author's special care to make the work as *easy* for the student as is possible without sacrificing thoroughness. We cannot too highly commend it.

JOHN HUNTER AND HIS PUPILS. By S. D. Gross, M. D., L. L. D., D. C. L. Oxon., L. L. D., Cantab., Professor of Surgery in the Jefferson Medical College; President of the Philadelphia Academy of Surgery, etc. Cloth; pages, 106. Price, $1.50. Philadelphia: Presley Blakiston, 1881. For Sale by John Moore, Ann Arbor.

In the preface, Professor Gross says: "I was anxious that the American student should become better acquainted with the inner life of this extraordinary man, be induced to study his writings, and profit by his example." With this in view a charming work has been written, and it seems especially fitting that one so eminent in the profession as Professor Gross should pay a tribute to the father of scientific surgery. What Hunter was to the profession in England a century ago, Gross is now to the profession in America; therefore this biographical sketch is of value on account of both the subject and the writer.

AN INTRODUCTION TO PATHOLOGY AND MORBID ANATOMY. By T. Henry Green, M. D., Lond., Fellow of the Royal College of Physicians, London, Physician to Charing Cross Hospital, and Lecturer on Pathology and Morbid Anatomy at Charing Cross Hospital Medical School, etc. Fourth American from the fifth revised and enlarged English edition. With one hundred and thirty-eight fine engravings. Cloth; pages, 340. Price, $2.25. Philadelphia: Henry C. Lea's, Son & Co., 1881. For sale by S. C. Andrews, Ann Arbor.

We have long considered this the best guide yet presented to the student for the identification of various morbid tissues. We have found it more satisfactory than any other. The present edition has been thoroughly revised and much new matter has been added. To the specialist the larger manuals may be more satisfactory, but to the physician as a guide in diagnosis we recommend this volume.

THE HEART AND ITS FUNCTION. Cloth; pages, 95. Price 40 cents. New York: D. Appleton & Co., 1881.

This is one of Appleton's series of "Health Primers," and like its predecessors it presents the subject in an interesting and instructive manner. The table of contents embraces the following subjects: (1) Why we have a Heart, (2) The Structure of the Human Heart, (3) The Function of the Heart and How it is Performed, (4) The Relations of the Heart to the General System, (5) How to Maintain the Integrity of the Heart's Function.

We hope that these primers might be generally read. Then the laity would not be so wholly ignorant of the mechanism of the body and the laws governing health.

SCRIBNER'S for May. Subscription price, $4.00 a year, single numbers 35 cents. Scribner & Co., 753 Broadway, New York.

Besides the usual number of spirited sketches, poems and illustrations which we have come to expect in *Scribner's*, this number contains two papers on Carlyle, and a short review of his reminiscences. Some of the most interesting illustrated articles are, "In and out of London with Dickens," "The Wild Sheep of the Sierra," "The Mutineers of the 'Bounty,'" and "The Sanitary Condition of New York."

CONSTIPATION PLAINLY TREATED AND RELIEVED WITHOUT DRUGS. By Joseph F. Edwards, M. D., Cloth; pages, 72. Price, 75 cents. Philadelphia: Presley Blakiston, 1881. For Sale by John Moore, Ann Arbor.

The advice given in this little book is sound, and we wish that it could be generally read by the laity. The author recommends a thorough system of dieting in order to keep the bowels regular.

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ORIGINAL ARTICLES.

CONSUMPTION: IS IT A CONTAGIOUS DISEASE? WHAT CAN BE DONE TO PREVENT ITS RAVAGES?*

BY B. COGSHALL, M. D., FLINT, MICHIGAN.

A late writer has truthfully said: "The most important question now engaging the attention of the medical world, is the *contagion or communicability of consumption.*" We may add it is one of the most vital questions affecting the well being of the human race—consequently is worthy of an important place in the discussions of a convention of this kind. This may be readily understood and appreciated when we call attention to the fact, that according to the statements of our best and most accurate statisticians, one-fifth of the human race die of this fearful malady. Therefore, we stand one chance in five of becoming a victim of this fell-destroyer. With these facts staring us in the face we can readily understand, that anything which may be said or done in this department of sanitary science, that will help clear up this much mooted subject, or shall tend to lessen the ravages of this disease, will be of the most vital interest to us all, as it will add so much to the longevity of the race and proportionally lessen the annual death-rate.

It is not our purpose in this paper to enter into a minute or exhaustive discussion of the subject, realizing as we do that papers and discussions in a convention of this kind should be plain and practical and such that the most humble mind can grasp and appropriate.

*A paper read at the State Sanitary Convention at Battle Creek, March 31, 1881.

We shall attempt to give a brief and condensed summary of the most important testimony bearing on the subject, trusting that the discussions which follow will develop and bring out more in detail the many interesting and important points connected therewith.

A few isolated physicians from times immemorial have held to the view that consumption was a contagious disease. Riverius as long ago as 1668, made the observation that members of a family have one after another succumb to the disease. Contagion he declared to be the "chiefest" cause of phthisis "for the disease is infectious."

"We may observe women infected of their husbands, and men by their wives and all the children to die of the same, not only from infection of their parent's seed, but from the company of him that was first infected." Similar observations have been put on record from time to time since, and yet no general acceptance of this theory obtained, until it was proved by experiments on lower animals that the disease can be communicated. Nor is the matter even yet set at rest, for many able writers and scientific observers contend that the affirmative of the question is not proved.

Villiman, in 1865, claimed to have demonstrated the fact that tuberculosis in any of its products was inoculable.

Tuberculous matter introduced beneath the skin of a rabbit or guinea-pig produced tuberculosis. This announcement created quite a sensation in the medical world and many able observers rushed into the arena, and so-called control experiments were instituted to prove the truth or falsity of this observation. The whole question of the contagion of consumption hinges on its inoculability. If it can be proved that the virus of tuberculosis is a specific poison the question is settled.

Klebs and Villiman maintain the communicability of tuberculosis by virtue of a specific germ, which Klebs has so far isolated as to render it visible under a power of four hundred and fifty diameters, and he says it is quite distinct when the power is raised to eight hundred or one thousand two hundred diameters.

In order to prove the truth of Klebs' assertions, that tuberculosis can be inoculated into animals, Schuller and Reinstadler prepared a fluid now known as Bergman's fluid in which they propagated the bacteria. These bacteria were introduced into the organism of animals, and invariably produced tuberculosis.

"The question whether there is or is not a specific contagium of tubercle as there is of syphilis or small-pox, has much of pathological interest. But the paramount inquiry for the sanitarian or physician is, can phthisis whether specific or not, ever be communicated."

Dr. Holden obtained in answer to circulars of inquiry, two hundred and fifty replies from leading physicians in various parts of the United States; of these one hundred and twenty-six expressed their belief in the communicability of consumption, seventy-four gave a negative answer and fifty were in doubt on the subject.

Holden says "such great lights in the medical world as Galen, Cullen, Heberdeen, Morgagni, Lænec, Andrall, Bright, Addison, Copeland, Drake, Dickinson, Budd, Walsh, Beale, Bodwitch, Flint, Stillé, DaCosta and others hold to the opinion of its commŭnicability."

The evidence which has produced these convictions in so many minds, is of the plainest and most convincing character. A man or woman previously in good health and free from the inherited predispositon to consumption nurses a wife, husband or friend through a fatal attack of phthisis, and then after a few months, sickens and dies of the same disease. Who of us have not observed this time and again? We record the following case coming under our own observation in the city of Flint, Michigan, it being in the family of M. B., an intelligent and industrious Irishman, whose family consisted of a wife and nine children, who were formerly healthy and robust. On inquiry we found the family record on both sides free from hereditary disease of any kind. About four and a half years ago, one of the sons, a lad of about fourteen years of age, contracted tuberculosis, and after a sickness of about a year died. Soon after this the father, forty-nine years of age, who had previously enjoyed excellent health, sickened, and after lingering a year succumbed. A year later, Jennie, a young lady of twenty-two years died, after a seven months siege with this uncompromising enemy of the human race.

On December 6, 1880, another member of this strickened household was placed beneath the sod. Alice a young miss of fourteen summers, after a nine months' illness. All of these cases were well marked cases of tubercular consumption. Some of the other members of the family have symptoms of the disease. Two of the family have removed to Dakota, where we understand they have regained their former strength, and are now enjoying good health. We are of the opinion that other members of the family will become victims of the disease unless they remove from their infected house, or the virus is destroyed by thorough disinfection. The following case as reported by Dr. L. G. Bryhn, in a Scandinavian journal will suffice on this point.

"A tuberculous man marries a woman of good constitution and family history. The man died and his wife became tuberculous as well as her sister who lived with the family during the husband's illness. This sister afterwards married a perfectly healthy man of good family history, who shortly afterwards became diseased as did also a niece who lived with the family for some time. One of their children died of tubercular meningitis, and two more show symptoms of the disease. The woman who nursed the first mentioned man's wife during her illness became tuberculous and died. She infected her sister who died from the same cause; while their parents lived to old age, and there had been no consumption in their families." He gives other striking instances and says he "considers the disease *catching* especially in the advanced stages," and adds, "this is quite as frequent a cause of the disease as heredity."

Dr. Tappeiner of Neran, in the Tyrol, in a paper read before a meeting of the German Naturalists and Physicians in 1878, says: "All physicians have observed cases of phthisis rapidly developed in individuals who had for a long time attended on patients with this disease, even when such attendants had not presented any predisposition, either individual or hereditary."

The doctor believes that the explanation of the fact is to be found in the inhalation of the expectorated matter scattered in the air by the coughing of patients. In order to test this opinion, he made experiments by intimately mixing a certain quantity of the sputa in a little water; he pulverized this emulsion by an appropriate process and subjected some animals to the inhalation of the substance during one or two hours each day for some time.

Dogs were selected as they show least predisposition to contract the disease. Three perfectly sound dogs were put into a pen in the Anatomico-Pathological Institute of Professor Buhl, of Monaco. The pen was situated near a window and is closed in all parts excepting above, where it receives the external air through a door. Some sputa was obtained from a phthisical patient, a spoonful of which was mixed in a quantity of water sufficient to make it of the consistency of almond milk. For an hour and a half each day, this liquid was pulverized and thrown into the pen. At the same time for the purpose of studying absorption by the digestive system of the tuberculous matter, two of the dogs were made to swallow a certain quantity of it from the same patient. The five dogs had apparently good appetites, presented neither cough nor diarrhœa, they ate freely, and were cheerful and nimble, without any symptoms of illness, unless a slight wasting and arrest of development. At first view the experiment gave a negative result. But the day preceding the first autopsy, a little finely powdered carmine was mixed with the tuberculous matter, in order to discover how far it had penetrated into the respiratory apparatus. Two of the dogs, subjected to inhalation, and the two which had swallowed the tuberculous mixture were killed six weeks after the commencement of the experiments. The results of the experiments were surprising. The five dogs presented a general miliary tuberculosis of both lungs, of the liver, the kidneys, and in the two that had swallowed the tuberculous matter, it was found throughout the digestive apparatus. The numerous stains of carmine which were seen on the pulmonary surface, showed that the inhaled liquid had penetrated into the pulmonary cells. The microscopic examination made by Professor Buhl, established in the clearest manner the reality of the lesions.

It has, therefore, been established experimentally, that in the dog a general miliary tuberculosis can be induced from the inhalation or the ingestion of the matter expectorated by a phthisical patient.

The possibility of the contagion of phthisis through the natural channels may therefore be concluded. The hygienic and clinical consequences of the experiments are of the highest importance. These experiments by such eminent and careful observers ought to be convincing to any one of the communicability of the disease. But we have stronger and more convincing proofs yet to offer.

The following striking case reported in September, 1878, in a German journal, is to the point, and must count for a strong argument in favor of the theory here advanced. "The only two midwives practicing at Neurenberg, a healthy little town of one thousand three hundred inhabitants in 1875, were R. and S. The woman S. was undoubtedly the subject of phthisis, with abundant puriform expectoration. In the first case described, Dr. Reich extracted the child by turning. While his attention was engaged with the mother, he noticed that owing to some difficulty in the child's breathing, the nurse, S. sucked the mucus from the infant's mouth, and also endeavored to promote respiration by blowing into its mouth. For the first three weeks the child progressed well, but then its health failed, and within three months of its birth it died of well-marked tubercular meningitis, initiated by symptoms of bronchial catarrh. In May and June following, two more children died of the same disease. These three cases had been attended by the nurse S. Dr. R.'s attention being thus attracted, he found on investigation that between the 4th of April, 1875, and the 10th of May, 1876, seven children in addition to the above three, had died (all within the first year) of tubercular meningitis, although in no case was there any history of hereditary tuberculosis; that all these cases had been attended by the nurse S., while of all the cases attended by the midwife R., not one had died of this disease, nor had any manifested in any way indications of any tubercular form of disease. The midwife S. herself died of phthisis in July 1876. It was ascertained that S. had been frequently in the habit of sucking mucus from the mouths of infants, and also of kissing and caressing them."

Perhaps the most conclusive experiments are those of Conheim and Solomonsen. They introduced tuberculous matter into the eyes of rabbits and invariably found it produced first local, then general tuberculosis. The smallest amount of true tuberculous matter introduced through a linear incision of the cornea into the anterior or aqueous chamber of the eye produced in about six weeks an eruption on the iris of minute nodules, which increased to a certain size, then underwent caseous degeneration, to be followed in the course of a month by a more or less general tuberculosis of the lungs, peritoneum and various other organs.

Of the greatest significance is the fact that these experiments were undertaken in a spirit of scepticism, as Cohnheim was one of the most pronounced and authoritative opponents of the theory of specificity of tuberculous virus, when the theory was first promulgated by Villiman. They observed that the above results occurred regularly whenever true tuberculous matter was used. After performing these famous experiments, Cohnheim completely changed his former opinions, and is now so thoroughly convinced of the inoculability of the virus, that he proposes to utilize it as a diagnostic criterion of tuberculous products. Harnsell, another famous observer, found that the insertion of tuberculous matter into the anterior chamber of the eye invariably inoculated the iris. The cornea and conjunctivia could moreover be inoculated directly, and in all cases the tuberculous matter inserted disappeared by the third day, and after from fifteen to twenty-three days of incubation tuberculous collections showed themselves.

The fact that these collections or masses were tubercular was proven after the method of the chemist in recognition of the action of poison, that is by insertion into bodies of other animals. Particles were put into the abdominal cavities of dogs and guinea-pigs. The dogs died of suppurative peritonitis. The pigs were kept under observation for three months and then killed, when all the internal organs and the skin were found without exception, to be filled with deposits of miliary tubercles. Cohnheim tried in vain to excite tubercles in the iris by introducing into the anterior chamber portions of non-tuberculous animal tissues of the most varied kind.

Cohnheim concludes, "everything depends upon the virus. We discover at all points the closest analogies between tuberculosis and syphilis. Both require above all things infection transmissability of the disease from person to person."

The comparison between these two diseases we consider well put, for we believe no other infectious diseases so nearly resemble each other. Both, it would seem, depends on a specific virus which must reach a mucous membrane or a denuded surface to be absorbed and induce the disease.

The first symptoms are local in both affections. Both diseases may be transmitted by heredity, and are usually latent for a time in the system. During this latent stage, both diseases impair the processes of nutrition and retard the development of the body.

Professor Whitaker, of the Ohio Medical College, in *Medical Record* of July 24, 1880, says: "While it is true, therefore, of both diseases, that they may be inherited, that is that both syphilis and tuberculosis may affect the ova and spermatozoids, as well as every other organ and tissue of the body; it is also true of both diseases that they are in the vast majority of cases not inherited but acquired. A thorough sifting of the cases will show this statement to be notoriously true of tuberculosis as of syphilis. So soon as the inoculability of tuberculosis is established the fact is also established that the disease is acquired oftener than inherited." He closes his able paper in these words: "The specificity of tuberculous virus is determined in a higher school, and by means more in accord with the principles of science than clinical observation. And the recognition of it clears the field for prophylaxis and opens up a new and more promising *outlook for the therapy of the disease.*"

In a late number of the *Medical Record* (March 12, 1880) we find the following abstract of a paper on the tuberculosis due to the inoculation of indifferent substances:

"M. Martin in a communication to the Societie de Biologie some time since claimed that the histological structure of tubercle nodules was devoid of special significance, since inoculation with indifferent foreign bodies produces the same anatomical leisons as those obtained with tuberculous matter. The pseudo-tubercular eruptions thus produced, in no way differ in their anatomical arrangement from the bodies held to be characteristic of genuine tuberculosis."

Martin then sought to determine whether or not the tubercles produced by the inoculation of tubercular matter differed in other respects from those following ordinary inoculations. He found that the tubercles of tuberculosis possessed the property of infection, whereas the pseudo-tubercles lacked this quality.

It was ascertained that in a series of consecutive inoculations on different animals, the infective properties of the original tuberculous matter was more and more active. In this respect it resembles the virus of septic processes, which Davaine has ascertained to acquire additional virulence, with every repetition of inoculation on a new animal. The tubercles of indifferent substances acted in an *entirely* different manner. No matter how much of such material was employed, the lesions produced were merely local in extent. This was invariably observed. In no case did any tendency to generalizations manifest itself, and not even the neighboring vessels and lymph glands became inflamed or showed tubercular changes.

The non-infectious nature of pseudo-tubercles was best shown by attempting serial inoculations. The second animal subjected to inoculation from the pseudo-tubercular matter of the first, showed scarcely a local lesion, and the third showed no effects at all. It appears, therefore, that in addition to the true or infecting tubercle, there exists a second kind of granulum, anatomically identical with the former, but totally devoid of all specific properties.

Certainly this is another important contribution to our knowledge of general pathology and it corroborates Cohnheim's previous assertions concerning the infectious qualities of tuberculosis. Martin is apparently ignorant of the work of Cohnheim, but this makes his results and conclusions all the more valuable, because they were evidently obtained independently of this German pathologist.

In concluding this portion of our paper we may be allowed to state, that our views in the main on this important question are well typified in the following cogent propositions promulgated by Dr. Budd, one of the cleverest and shrewdest clinicians who ever lived.

(1) "That tubercle is a true zymotic disease of a specific nature in the same sense as typhoid fever, scarlet fever, typhus, syphilis, etc., are.

(2) "That like these diseases, tubercle never originates spontaneously, but is perpetuated solely by the law of continuous succession.

(3) "That the tuberculous matter itself is (or includes) the specific, morbific matter of the disease, and constitutes the material by which phthisis is propogated from one person to another, and disseminated throughout society.

(4) "That the deposits of the matter are, therefore, of the nature of an eruption and bear the same relation to the disease, phthisis, as the yellow matter (the stools) for instance of typhoid fever.

(5) "That by the destruction of this matter on its issue from the body by means of proper chemicals, or otherwise, seconded by good sanitary conditions, there is reason to hope that we may eventually, and possibly at no distant day, rid ourselves entirely of this fatal scourge."

WHAT CAN BE DONE TO PREVENT ITS RAVAGES?

In order to discuss this important question intelligently, it is necessary to understand by what channels these tubercular deposits reach the system, and how they can be dislodged and thrown off, when they have found a lodgement in the body.

From what has been said in the former part of this paper, and the convincing experiments there narrated, it seems to us that it is clearly demonstrated that these specific germs may be conveyed to the lungs and respiratory passages, during the act of respiration through the expectorated matter floating in the air, thrown off from the decaying lungs of phthisical patients, and finding a lodgement, a nidus in the mucous membranes, a local trouble is set up which soon invades the lymph glands in the immediate vicinity, and unless arrested at this point, the disease speedily becomes general through the contamination of the blood. The experiments and observations of Dr. Grad, veterinary surgeon, at Wasselonue, Alsace, on the spread of the disease by contaminated stalls are very conclusive and demonstrate the proposition that CONTAGION by CONTACT is possible, and that the extension of the disease by cohabitation is of more general occurrence than is usually supposed.

This fact being established, the question naturally arises, what can and should be done by those dwelling under the same roof, and who are daily brought into contact with friends sick of the disease, and especially those who nurse the patient?

In the first place, they should be very particular to have the air in the rooms pure, by thorough ventilation, in order to get rid of the emanations from the lungs, the impurities constantly floating in the air of the sick-room.

Second, they should be exceedingly careful to avoid inhaling the breath of the sick one. Therefore, they should avoid sleeping in the same bed or in the same room unless thoroughly ventilated. They should frequently go into the open air, and for several minutes at a time, fill their lungs to their utmost capacity with free, pure air, slowly exhaling the same. They should also by every hygienic measure at their command, keep their system in a good healthy condition, for it is undoubtedly true, that a person in robust health can withstand the debilitating influences of tubercles inhaled into the lungs or taken into the stomach; while a debilitated and partially broken down constitution is a fruitful soil in which these living germs propagate themselves and grow. Then, again, every sick-room of this kind should be constantly supplied with efficient and appropriate disinfectants in order to destroy what remaining germs may be left by inefficient ventilation.

Then in case of death of the patient, the house should be thoroughly disinfected by fumigation, the premises renovated, and every sanitary precaution taken to destroy the infectious virus. There is much that might be said in this connection, but want of space forbids.

DISEASED MEATS.

Another source of infection is undoubtedly through eating diseased meat, or meat infected with tubercle.

Professor Chauveau, of the Lyons Veterinary School, who has for years been experimentally studying the intimate pathology of the various contagia, presents conclusive proof of the transmission of bovine tuberculosis. The success of his researches has afforded some startling results pertaining to the use of diseased meat, and his well designed experiments on cattle have settled among comparative pathologists, the question of the virulence of tuberculosis.

The discovery that certain rich virulent matter can infect as readily through the digestive organs as by any other channel, has given him a world wide reputation.

Two years ago, Professor Colin, of the Albert Veterinary College, contributed a series of observation on the *communicability* of tuberculosis, which were very conclusive and shed a flood of light on this important sanitary question in relation to diseased meat. Many other German and Italian authorities have put on record their clinical experiments confirming the truth of the above mentioned experiments. The celebrated Professor Orth, of Göttingen has lately published his researches and experiments from which we extract the following: "He fed fifteen animals with tuberculous matter from a diseased cow, nine of which became infected, of these four died. The remaining five became extremely emaciated and were killed. On examination nearly all of the organs of the body were found involved in tuberculosis. Consequently the transmissibility of this disease to animals is proved." He insists that its transmission to man is possible, and has undoubtedly many times taken place.

Dr. Cressy, in proceedings of Connecticut State Board of Health says, "no where in the struggle of life against the manifold causes of disease, do we more effectually imperil our health and happiness than in partaking of animal food of a suspicious character." He also says, "the meat from cattle affected with tuberculosis is not unfrequently found in our American markets, especially in our larger cities, and even in country towns," and adds, "I now affirm in a pathological point of view, that the baneful consequences to our health from the use of infected meat and milk, are not surpassed in the whole catalogue of contagious affections."

Such infected meat, therefore, should not be used; for any organ or texture in which tubercle has been deposited, is surely a dangerous article of food. From what is known in relation to the pathology of this virulent malady, we should interdict the sale of consumptive meat and milk. Especially in the advanced stages of the disease when the glandular tissues have become involved.

COOKED MEAT.

The question naturally arises, does cooking the meat destroy the infectious qualities? On this point, we have the experiments of Professor Gerlach. Solid, fibrous and broken down tuberculous masses were cooked from one-fourth to one-half hour, and then fed to five small pigs and ten rabbits in considerable quantities. The result was, that the five pigs and five of the rabbits, two-thirds of the whole number, contracted the disease. In all the experiments with cooked food, the animals were less affected, than those fed with raw meat.

From this it appears, that tuberculous meat cooked from one-fourth to one-half an hour is still infectious, yet in a less degree than in the raw state. It is probable, however, that long, thorough cooking would destroy the virus.

TUBERCULOUS MILK.

The recent investigations of Professor Bollinger, of the University of Munich, on the artificial production of tuberculosis as induced by the consumption of diseased milk, are of the greatest importance. He claims that the milk of such animals has a preëminently contagious influence, and reproduces the disease in other animals experimented on from that point of view. He believes also that such milk, even when boiled, still retains its injurious properties.

Furthermore, he maintains that beyond doubt the tuberculosis of the human subject, though not completely indentical with that of the cow, is yet strictly analogous to it, and that consequently the wide prevalence of tuberculosis in the native herds, at least five per cent of which are affected, is a standing danger to the community.

In speaking of this subject, Dr. Fleming, of the British army, who has given the subject much attention, says: "There is every reason to *prohibit* the use of milk from cows affected with tuberculosis, and especially for infants who mainly rely upon this fluid for their sustenance, and whose powers of absorption are very active. Even if it did not possess infectious properties, its deficiency in nitrogenous elements, fat and sugar, and the increased proportion of earthy salts, would alone render it an objectionable article of diet. In fact, it has long been known, it was liable to produce diarrhœa and debility in infants, but though many children fed on such milk have died from tuberculosis, or a localized type of it in the bowels known as *Tabes Mesenterica*, the part probably played by this liquid in its production has rarely been suspected.

He further observes, that as the commencement of phthisis is generally so insidious in the human species, it is most difficult to arrive with any degree of certainty at the causes which directly induce or favor its development; but, from the evidence before us, it is to be feared that at least one of its sources must be referred to the utilization of the *carcass*, but more especially of the *milk*, of phthisical cattle as food.

It is certain that tuberculosis is not uncommon, and that it is a destructive disease among *dairy* cattle especially, and more particularly those in towns; that the udder of these animals is one of the glands not *unfrequently* involved; that infants and adults consume milk in somewhat large quantities, and that phthisis is a very prevalent and fatal malady in the human species, and chiefly among the dwellers in towns and cities.

Dr. Bromtey, of Lancaster, England, found characteristic tubercular lesion in the pulmonary organs of two pigs, which had been fed on milk from a consumptive cow; while the mother of the pigs showed no signs of the disease on being slaughtered. Hence, the necessity of guarding ourselves against such a diseased article of food.

Professor Gerlach, Dr. Toussaint and many other veterinary pathologists have demonstrated by hundreds of positive experiments, that this milk is *infectious* and contains a *specific virus* that can be transmitted from one species of animals to another and from animal to man, thus proving the *identity* of this dreaded bovine malady with that in the human subject.

SANITARY REGULATIONS.

It being satisfactorily proved that the disease may be and often is communicated in this way, it naturally follows that there ought to be some necessary *sanitary regulations* and sanitary officers to enforce these regulations, in order that we may be assured that our meat and milk supplies are pure and wholesome. There is no doubt but the traffic in this country in diseased meats is quite extensive and calls for appropriate legislation to prohibit it. The public health is involved, and every body should understand the danger of contracting the disease in this way, and the importance of having competent inspectors to protect our lives from the invasion of disease from this source.

Great Britain has inaugurated this movement, and now has professional inspectors at all the principal commercial points in her vast domain, and recently several important stations for pathological observations have been created by the British government. This government ought to follow close in the footsteps of her illustrious mother and inaugurate and maintain similar stations and officers in this country; then we might expect that very much would be done to assist in preventing the ravages of this great scourge of the race.

WHAT CAN BE DONE TO DISLODGE THE ENEMY WHEN HE HAS POSSESSION OF THE CITADEL.

In order to properly discuss this subject, more space would be needed than we have at our command. We will only offer a few general remarks in this connection. Up to a comparatively recent period, phthisis was regarded as necessarily a fatal disease and but little was done, and that to little effect, to arrest the disease.

At present, however, it is generally admitted that judicious treatment, can in a vast majority of cases not only prolong life for months and years, but in many cases a complete cure can be effected, even in advanced stages of the disease.

Dr. John Hughes Bennett, in his admirable work on "Pulmonary Consumption" gives details of the arrest of the disease in its most advanced stages. He says: "I express my convictions that its permanent arrest and cure are, by judicious treatment and hygienic management, becoming every day more frequent and more widely extended."

A study of the pathology of the disease will lead us to the conclusions that *phthisis* is dependant:

(1) On impoverishment of the blood.

(2) On exudation into the lungs or other organs which assume a tuberculous character.

(3) On destruction of the lungs, owing to successive depositions and softening of these.

This being the case, common sense would say our endeavors should be directed to improve the faulty nutrition by every means at our command, to cause the absorption of this tubercular exudation and to arrest the ulcerative process and prevent a recurrence of the disease.

Bennett says: "The great indication in the treatment of phthisis pulmonalis should be to improve the nutrition of the economy. This does not merely consist in increasing the quantity and improving the quality of the food, but in employing all those means which shall secure—first, an appropriate diet; second, causing its assimilation and the formation of good blood; third, securing the proper purification of it by the atmosphere; fourth, seeing that a proper demand for the addition of new matter to the tissue is created by sufficient exercise, and fifth, that the effete matters be properly excreted from the economy by the emunctories. All these processes are comprehended in the function of nutrition."

Had we time at our disposal, we should like to discuss this subject more in detail under the following heads, proper diet, sufficient exercise, pure atmosphere, suitable climate, bathing, etc.; but we desist.

In conclusion, allow us to say, that we are very certain whoever attempts to arrest and cure the disease in any other manner, will meet with disappointment. In this disease more than in any other, does the so-called hygienic treatment offer hopes of success. All of our medical treatment should be in subordination to the hygienic. This statement gives us the opportunity to say that all of the nostrums and so-called consumption cures are of no benefit, but a positive injury not only from their inherent injurious properties, but by trusting in them, much valuable time is lost as well as money wasted. *Pure air*, and plenty of it, is worth more than all the "consumption cures" ever concocted.

LEAD POISONING: TWO CASES.

BY A. OVERFIELD, M. D., HANCOCK, MICHIGAN.

About March 1, 1881, John O., twenty-two years old, presented himself for treatment with the following history which, meagre as it is, was very difficult to get, on account of the low grade of intelligence of the patient.

In July, 1879, while working in a pottery he was attacked with colic lasting about a week. The colic was accompanied by constipation of the bowels. As soon as able he resumed his work in the pottery; in four months he had another attack. About January 1, 1880, he had an epileptiform seizure in which he became unconscious for a few moments only. Shortly after this he noticed a loss of power in the thumb of the left hand; this loss of power gradually extended to the whole hand. The right hand also became paralyzed or rather the extensor muscles become paralyzed (the flexor muscles not being involved in either hand). For the last eight or ten months his condition has remained unchanged. His appetite is good as is also his general health. The paralysis of the extensor muscles of both hands produces the well known "drop wrist;" he has also the other characteristic symptom of lead poisoning, viz: the blue line on the gums. The exposure to lead was by the use of red lead in glazing the pottery. The diagnosis of course was positive when these facts had been ascertained.

Prognosis.—Rather unfavorable on account of the length of time the paralysis has existed.

Treatment.—Iodide of potassium, Turkish baths and Galvanic current. No improvement after six weeks of treatment.

On March 8, was called to see M. T., aged thirty-five years who had been working at the same pottery. Found him suffering from severe colic with retraction of the abdomen and constipation of the bowels. The diagnosis was immediately made by an examination of the gums where the characteristic blue line was found. Opiates to quiet the pain were followed by hydragogue cathartics to eliminate the lead. One week later I was called in the night to see the patient. He was found to be suffering from eclampsia saturnia, one convulsion following another without intermission. He died about thirty-six hours later as nearly as could be learned from the convulsions. He was a friendless wretch boarding with saloon people who gave him no attention, consequently no treatment could be carried out satisfactorily.

CONVERGENT STRABISMUS: TWO CASES.

BY A. J. ROSENBERY, M. D., HOUGHTON, MICHIGAN.

Annie M., aged fourteen years, had convergent alternating strabismus for several years, amounting to four and a half or five lines. On February 3, after the patient was anæsthetized, strabotomy of the internal rectus of the left eye, was performed, care being taken to interfere as little as possible with the connective tissue surrounding the muscle, so that too much should not be done at a single operation. On March 3, it being apparent that about half of the existing strabismus had been corrected by the first operation, the operation was repeated on the right eye. Immediately after the operation, as it was found that she converged all right when the pencil was brought to from four to six inches of the eyes, no sutures were used. The result at this writing (April 28) is entirely satisfactory.

Joseph U., aged eleven years, strabismus existing from infancy, has also a small central capsular cataract in each eye—there was also paralysis or rather paresis of the external rectus of the left (squinting) eye—the strabismus being concomitant. On account of the complications the prognosis was unfavorable. However, I decided to operate; the operation was performed on the left eye on February 10, and on the right eye on March 6, the correction being as nearly as possible equally divided between the two eyes. About four or five weeks after the last operation the squint began to return and is now nearly as great in degree as it was originally, although the lad says he sees much better than before any operation was performed. Electricity is being applied to the external rectus of the left eye in the forlorn hope to restore some of its lost power.

CASES FROM PRACTICE.

BY JOHN L. CAMPBELL, M. D., WABASH CITY, OHIO.

Case I—Pernicious Fever.—Mrs. A. W., living near the flats of Wabash river, which is a malarious region, called at my office on the 5th of January, complaining of having had the ague for a few days. Accordingly I gave her the prescribed treatment which she was to begin next morning. But early on the 6th I received word to "come immediately as she was dying." As she lived only a short distance from my office I soon arrived at her house; I found her unconscious; limbs cold; pulse absent from wrist, and a complete flexion of fingers. From the history of her case the day before and what the family could give me, I diagnosed congestive chill. Immediate treatment consisted in rubbing the limbs with brandy and mustard tea (very strong), and placing hot bricks wet with water under the bed clothes; giving large doses of brandy internally at short intervals, also giving some mustard tea, and aromatic spirits of ammonia, for stimulation. After working for nearly three hours (I began to think in vain), I observed the palms of hands were getting warm, then my hope returned. Soon I detected a small pulse in the wrist, for the first time, then general warmth followed by an extreme heat of skin, and finally perspiration. At this time consciousness began to gradually return. To prevent another attack, I gave quinia sulphate in five grain doses every hour for fifteen hours, followed by a mercurial. Then put her on the compound tincture of cinchona, under which she gradually regained her strength, and in a short time was as well as ever.

Case II—Capillary Bronchitis.—A. G., babe, aged five months. "It was taken with a bad cold on its lungs," the mother said. There was light hacking cough, with great dyspnœa and prostration; pulse very rapid. Examination revealed slight dullness on percussion in lower lobes of lungs, and a few crepitant rales on auscultation. The chest was extremely sensitive to touch. This was the condition when I was called on the 6th of February.

Diagnosis.—Capillary bronchitis. Temperature, 102°.

Treatment.—First to relieve dyspnœa, I gave an emetic of fluid extract ipecac, ten drops, which caused the child to vomit a large amount of thick tenacious mucus, after which it breathed easier. I left orders to give the ipecac one drop every hour, to increase secretion, also one grain of quinia sulphate, every three hours to abate fever. On the 7th, found cough looser, but prostration greater. Breathing easier. I discontinued the ipecac, continued the quinia the same as before, with the addition of one grain of carbonate of ammonia in syrup every two hours. Also ordered a cornmeal poultice to be placed on the chest. This caused the child to sleep for the first time since its sickness began. Next day I found it improved. Treatment the same. By the 13th its symptoms disappeared except a slight cough.

HISTORY OF TWO ATTACKS OF PERITONITIS, WITH PERFORATION OF THE ABDOMEN IN THE SECOND.

BY J. N. PASCOE, M. D., CHICAGO, ILLINOIS.

I was called to see F. B., aged thirteen, on March 30, 1880. Found a well marked typical case of general idiopathic peritonitis. The patient was given opiates in moderate size doses, but the pain and fever continued to increase until the patient became wildly delirious. An ice cap was now applied to the head to help control the delirium and lower the temperature. A linseed meal poultice was placed over the abdomen and

℞.	Morphiæ sulph................................	gr. ¼.
	Spts. chloriformi..............................	♏ viii.
	Aquæ..	ʒ i.

was given hourly until a decided physiological effect was produced, bringing the respirations down to nine per minute on the second day. The dose was then so graded as to hold the respirations at about twelve per minute. Under this treatment the patient rested much easier, and the symptoms presented a corresponding degree of improvement. The temperature fell from 41° Centigrade to 39.5° Centigrade, and the pulse from 130 to 100 beats per minute. The line of treatment given above was followed throughout the course of the attack with the most satisfactory results. The spirits chloroformi in the mixture caused the irritable stomach to retain the medicine, when a plain solution of morphia would be immediately rejected.

The crisis was passed on the sixth day, when the symptoms indicated that the disease was yielding to the treatment. The symptoms gradually improved day by day. At the end of the third week the patient had a spontaneous movement of the bowels (the first movement since the attack). The next day a diarrhœa set in, which was easily controlled by

℞.	Tinct. opii. camph.	48	00
	Acidi sulphurici	0	50
	Syrupi simplicis	16	00

Sig. One drachm, pro re nata.

At the end of a month the patient was sitting up, and soon made a good recovery, having a better appetite, and gaining more flesh than was lost during the attack. The patient was cautioned against the danger of inducing another attack by any severe exercise.

Second Attack.—The young man refrained faithfully from the active sports in which his young companions indulged during the summer and autumn; but he felt so strong and hearty in the early part of December that the siege of the spring seemed like a dream of the past. On the 9th day of December, F. removed himself from quarantine (so to speak), and engaged in an exciting game of foot-ball. The next day he presented symptoms of localized peritonitis in the right inguinal region. The inflammation gradually extended along the peritoneum until the peritonitis became general on the third day of the attack.

On December 13 catheterization had to be commenced to relieve the retention of urine. The kidneys now began to fail in the performance of their proper function, probably somewhat influenced by the full doses of morphia. Their action was restored again by the use of potassium acetate, and fluid extract digitalis. The peritonitis was kept under pretty good control by the same treatment employed in the previous attack.

At the end of the second week the case was proceeding quite favorably, but there was considerable symmetrical distention of the abdomen. Palpation and percussion proved that the distention was due to an accumulation of fluid. Although the peritoneal inflammation and symptomatic fever gradually declined, still the distention of the abdomen gradually increased. I gave

℞.	Potassium acetate	gr. x.
	Potassium iodide	gr. v.
	Fluid extract digitalis	♏ iii.

three times daily, to act as an absorbent and eliminant. A faithful use of the remedy for several days seemed to slightly relieve the distention.

In this as well as in the preceding attack, the tongue and mucous membrane of the throat and mouth became highly inflamed and covered with ulcerated patches. The parts being so exceedingly sensitive that only the blandest kind of liquids could be tolerated. This condition was relieved by astringent washes and potassium chlorate.

On December 25 a little brandy was added to the tonic course upon which the patient was put. The first dose produced rather an unexpected result; the patient broke out into a profuse perspiration, during which the temperature fell from 38.5° centigrade to normal, the pulse came from 95 beats per minute to 80, and the patient passed urine spontaneously for the first time since the third day of the attack. The temperature remained normal, with a few temporary variations thereafter. The patient had a spontaneous movement of the bowels on the 26th of December, his appetite and strength gradually improved, and the crisis seemed to be passed; but the distended abdomen remained *in statu quo*.

A circumscribed red spot made its appearance in the right inguinal region opposite the ileo-cæcal valve, indicating the pointing of an abscess. The parts were kept well poulticed. On January 8, 1881, the abscess ruptured spontaneously, producing such a profuse discharge of sero-purulent fluid that it had to be ladled away with a large iron spoon. The discharge the first day amounted to eighty ounces; the next four or five days six ounces per diem. After that the daily discharge gradually lessened until it entirely ceased, and the orifice in the abdomen closed in the early part of March.

The pus in the discharged fluid seemed to come from a sub-peritoneal abscess; the serum, from the abdominal cavity. Passing the hand over the body from the epigastric region to the orifice in the abdomen would produce the evacuation of clear pus; passing it from the left side toward the orifice would produce the evacuation of intermingled pus and serum, closely resembling milk in appearance. By pressing from below upward, clear serum could be obtained. A probe was passed through the orifice into the abdominal cavity, revealing an exquisite sensitiveness of the internal structures. The intestinal canal seemed to be intact, as there were no signs of fæcal matter in the sero-purulent discharges, and a natural movement of the bowels occurred every day.

The patient was kept on good liberal doses of quinia, both before and after the rupture of the abscess, and at no time showed any symptoms of pyæmia, except a slight chill or two the day before the abscess opened. The temperature, as before stated, remained normal after December 25. As already intimated, the patient made a satisfactory recovery, and at the present writing (March 20) is walking around.

1208 State street, Chicago.

REPORTS OF TWO CASES FROM OPHTHALMIC CLINIC, WITH SHORT CLINICAL LECTURE.

BY GEORGE E. FROTHINGHAM, M. D.,
Professor of Ophthalmology and Otology in the University of Michigan.
REPORTED BY E. N. HAWLEY,
Clinical Assistant.

Case I.—May 5, 1881, W. C., age fifty-four. This is a case which will be a source of anxiety and annoyance to the practitioner. It is a case bordering upon the condition demanding an operation, yet the associated conditions would hardly justify us in operating. He gives a history as follows: One year ago patient had typhoid pneumonia and his general health has never been good since. During the greatest severity of the attack his right eye became inflamed. At first, as he was not expected to recover, no treatment was undertaken. During convalescence he was treated with a mixture of turpentine and sweet oil dropped into the eye. This only served to make the eye worse. The eye continued to trouble him through the summer, and last fall he applied to another doctor who found a large ulcer upon the cornea, iritis, granulated lids and the whole eye injected and hypersensitive to the light. He has used a strong solution of atropine, alum crayon, and made other applications to the lids, but the progress has been very slow. At present he complains of a scratchy feeling of the lids. They adhere in the morning, and the sight is very much impaired. He has had no severe pain since the first attack, but when exposed to light, winds, or dust, it becomes more inflamed and painful. The left eye has given him no trouble.

A test of the amount of vision shows that of the left eye to be normal. That of the right eye is only two one-hundredths. Upon closer examination we find quite a considerable number of different pathological conditions. We find an opacity of the cornea, a pterygium trachoma, a tendency to anterior staphyloma, and iritis. The doctor, who brings him here for advice has used a strong solution of atropine, but the pupil has failed to respond. He has been unable to get any dilatation whatever. There are either adhesions of the iris to the capsule or structural changes in its tissue itself, either of which would cause its immobility. If adhesions are present, which is more probable in this case, the attempt at dilatation and contraction caused by the varying stimulus of light is sufficient to keep up a dangerous irritation, and an operation breaking up these adhesions and separating the pupillary margin of the iris from the capsule with a blunt hook, would be required. But he tells me he has only seen the doctor once in a while, when it happened to be convenient, and has had no steady treatment. This is too apt to be the case, and let me advise you that, if you wish to carry such cases through to a successful termination, you must give them steady and unremitting attention, and not allow them to drop into your office whenever happening to be in town, having an application, and going away to be seen again in five or six days, and perhaps two weeks. The patient's left eye seems to be in a good condition and he is experiencing no pain. An operation is not demanded either to relieve pain or to restore sight, and we will only advise his attending physician to commence regular and systematic treatment of the lids, with astringent and alterative applications, as nitrate of silver, keep him out of dust, and unnecessary and improper exposure, and have no operative interference unless severe pain comes on, or the vision of the other eye becomes in some way impaired.

Case II.—In connection with the preceding case we are able to present to you another of exceeding interest. Interesting partly on account of its similarity, and partly on account of its comparison.

First let us consider his history.

A. B., aged twenty-three. During last January patient was ill with typhoid fever. At the beginning of convalesence he found his whole right side was paralyzed. His right ear was deaf, and he began to notice something wrong with the right eye. It became inflamed and began to give him a great deal of pain; there was also a copious discharge of tears. Soon the sight began to fail, the severe pain continuing, and by the middle of February the eye was entirely blind. He has been a great sufferer from the continual pain since February, and consults us hoping to be relieved from the pain and if possible have restoration of sight and hearing.

Upon further examination we find the ear to have no perception of sound, neither through the ordinary channels nor through the bones of the cranium and in all probability the auditory nerve is destroyed as to its function. There is some reddening of the drum membrane. But it is to the condition of the eye that I wish to call your attention more particularly to-day. Here is inflammation of the whole uveal tract. The lens is opaque and swollen pushing the iris forward and making the anterior chamber shallow. There is a tendency to anterior staphyloma and the iris is attached to the anterior portion of the capsule of the lens, a condition called posterior synechia. There is complete loss of vision, not even perception of light is present. The *vision* of the left eye is still unimpaired. Now here is an eye which is of no practical use to its possessor, which is a greater disfigurement to his personal appearance than a good artificial eye would be, and which more than all the rest is a cause of debility, is giving him great and constant pain, and is a very treacherous source of danger to the remaining good eye. He has been in the hospital during the last ten days, and we have had him under observation. He has taken bitter and nerve tonics, but there has been no improvement in his condition. He has suffered constantly from pain in the eyeball and head. The left eye has shown decided symptoms of sympathetic disturbance. It has grown sensitive to light, and excessive lachrymation is present most of the time. Vision at times blurs but there seems to be no limitation of the field of vision by a rough test.

This test may be made by placing the patient directly before you, causing him to look at your own eye, yourself at the same time looking into his. Now approach the fingers toward the eye from different directions, testing the distances at which it enters the field and can be distinguished. Your own eye will be a guide in determining the extent of his visual field, and will detect motion of his eye toward the approaching object. His vision for distance is equal to twenty-fifteenths and the near point is three and one-half inches. As yet there is no structural impairment of this eye although it is getting weaker and serious disease of an inflammatory character is threatening to invade it. If we could look into this diseased eye we should find its coats undergoing degeneration. The proper thing to do is to enucleate the eye and at once remove the source of irritation.

May 6: Ether was administered and the right eye enucleated.

May 8: Has recovered nicely, all pain has disappeared. Left eye much improved.

May 9: Condition still improving. Can look directly at the sunlight without any unpleasant feelings. Left eye looks perfectly clear and healthy. Lachrymation has wholly ceased.

JABORANDI IN A CASE OF DIPHTHERIA.

BY H. M. WHEELER, M. D., NORTHFIELD, MINNESOTA.

On August 20, 1880, I was called to see E. N., aged fifteen, female. I found her pulse 130, temperature 104, and diphtheritic patches formed on both tonsils, soft palate and pharynx. The patient stated that she had been at work in a house "where a woman had died of some disease three months before." Farther I could not trace the cause of the disease.

I prescribed the usual mixture of quinia and iron, and a gargle of sodic sulphite, myrrh, glycerine and capsicum. The next day the temperature fell to 102°, and did not again rise above that point. However, the pulse continued fast, and the patient gradually grew worse until the eighth day, when her condition seemed truly desperate. Her pulse was now above 160, and began to intermit. Respiration was 60 per minute and resembled that of capillary bronchitis. She was cyanotic much of the time. Divergent strabismus had developed, and the characteristic odor could be plainly discerned at the foot of the stairs leading from the street to the tenement. The kidneys had become affected.

In the meantime I had put her on a mixture of belladonna and digitalis, and was giving her injections of alcohol and defibrinated blood alternately. These were retained and well borne. On the morning of the ninth day her tongue was dry and scarred, and there was no secretion about the mouth and throat. Respiration 65 per minute and very labored, constant fanning being necessary. The vapor of lime water had been used in large quantities, but did not restore secretion.

Remembering the occasional power of jaborandi to excite broncorrhœa, I began its cautious administration. In a short time secretion was restored, and the patient began to expectorate pieces of the adventitious membrane, not only from the tonsils and pharynx, but she coughed up a complete cast of the bifurcation of the trachea, and casts of bronchial tubes of all sizes, some as small as could be recognized by the unaided eye.

The patient recovered from the disease and paralysis, and is now entirely well.

NOTES ON TWO NEW REMEDIES.

BY VICTOR C. VAUGHAN, M. D., PH. D.,
Lecturer on Medical Chemistry in the University of Michigan.

Quebracho in Spasmodic Asthma.—Mr. H., twenty-three years of age, gave the following history: He lived on a farm until five years ago, when he entered college. During the months of March and April of his second college year, he suffered from spasmodic asthma, an affection which he had never known before. Since then he has had asthma every spring. The trouble generally lasts for about two months and then disappears to return the next spring. Although the usual asthma remedies have been tried, nothing but time, gave complete relief. This spring the attacks have reappeared. The spasms come on about every thirty minutes during the day, but do not appear during sleep.

I prescribed the fluid extract of quebracho. of Parke, Davis & Co., to be taken in half drachm doses three times per day, the dose to be gradually increased by ten drops to one drachm. After the second day all difficulty of respiration disappeared. The medicine was continued for one week. Now two months have passed and the asthma has not returned.

Petroleum in Chronic Pneumonia.—We have used crude petroleum in one case of chronic interstitial pneumonia with an exceedingly flattering result. Under iodide, quinine, veratrum, tartar emetic, ipecac and ammonium chloride, tried at different times, the patient continued to grow worse. After four weeks of this treatment, petroleum made into an emulsion with acacia, and mixed with sherry wine at the time of taking, was given three times per day, about one-half teaspoonful of petroleum being taken at a dose. In a few days the rate of pulsation (which had been on an average 120 per minute) became normal, and the respiration became easy, the dullness rapidly disappeared, and recovery complete.

The patient a medical lady, attributes her improvement to the petroleum wholly. I am aware that one case of improvement does not prove much for a new remedy, but this added to the testimony of others, who have reported similar successes with the same agent may be of some value. At any rate, the experiments, which have been made with petroleum, have proved successful to an extent sufficient to warrant further trial.

Probably the best mode of administration would be in capsules. I see this recommended in one of our exchanges. There will probably be found more objection to the odor than to the taste of the petroleum.

It should have been stated that tincture of digitalis was taken in five drop doses twice per day. This probably aided in producing the beneficial effects.

EDITORIAL BRIEFS.

A REQUEST.—We will consider it a favor if our readers in corresponding or dealing with our advertisers will mention the fact that the advertisement was seen in THE PHYSICIAN AND SURGEON.

MESSRS. FARRAND, WILLIAMS & CO.—We desire to call the attention of our readers to the preparations furnished by this house. They make specialities of elixirs, syrups and preparations of cod liver oil. After having used these preparations for quite a while, we can say that we have always found them elegant in form and reliable in action.

THE law to regulate the practice of medicine recently enacted by the legislature of Colorado resembles very much the Illinois law. Applicants, who are not graduates, are required to pass examination on anatomy, physiology, chemistry, pathology, surgery, obstetrics and practice of medicine (exclusive of materia medica and therapeutics).

MORE OF IT.—*The Michigan Medical News* has been at it again and here is a sample: "A typographical error in a recent number of the *News* has disturbed the mental equilibrium of the 'presiding genius' *is* of THE PHYSICIAN AND SURGEON, etc." Brother Mulheron, take some friendly advice, kill off your funny man and hire a cheap boy to read your proof.

THE ILLINOIS STATE MEDICAL SOCIETY.—This society met in Chicago on the 17th of last month and had a pleasant and profitable session of two and one-half days. On Wednesday evening a banquet was given at the Grand Pacific hotel and those present will long remember the rich repast for both body and mind furnished by our genial brothers of Illinois. Professor S. J. Jones entertained a goodly number of friends quite royally at the Chicago club. The officers for the ensuing year are as follows: President, Robert Boal, Peoria; vice-presidents, A. T. Darrat, Tolono, and Ellen Ingersoll, Canton; treasurer, J. H. Hollister, Chicago; secretary, S. J. Jones, Chicago; assistant secretary, W. A. Byrd, Quincy. Quincy was selected as the place for holding the next session.

THE ANN ARBOR BOARD OF HEALTH.—Attention is called to Mr. Smith's letter in this issue. There are many rich and racy incidents connected with the history of that case of small-pox. One of the Board of Health recommended potassium cyanide as a disinfectant. Some one was sent to the drug store for the article, and the druggist refused to give it without a prescription from some physician. A young man, who had been living in the room adjoining the one containing the small-pox patient, was told by a member of the Board that he (the young man) could remove his goods from the room if he would do so at night and not let any one know of it. No disinfection was required. One member of the Board, on visiting the patient to decide whether he had small-pox or not, did not get within six feet of the patient and did not stay in the room two minutes. There are many other points of equal interest but we give these as samples.

COMPRESSED TABLETS FOR HYPODERMIC USE.—Messrs. Wyeth & Bro., of Philadelphia, are now furnishing the profession with compressed tablets for hypodermic medication. All substances which are used hypodermically are prepared in this way. Each tablet contains the proper dose and the mass is made up with sodium sulphate. When needed, a tablet is placed in a spoon, ten or fifteen drops of water are drawn up into the syringe and then poured over the tablet. Slight pressure upon the tablet with the syringe causes complete solution and this is drawn up into the syringe, the needle attached and the injection made. We regard these tablets as filling the great desideratum of hypodermic medication. There is no longer any excuse for producing abscesses by the injection of an old solution containing penicillium. The tablets are much more convenient than powders, as there is no liability of loss. We have thoroughly tested the solubility of the tablets, and find that no difficulty need be feared in this direction.

MICHIGAN STATE MEDICAL SOCIETY.—The sixteenth annual meeting of this society will be held in Bay City, commencing on Wednesday, June 8, at 10 o'clock, A. M. The Michigan Central, the Detroit, Lansing and Northern, the Lake Shore and Michigan Southern, the Detroit Grand Haven and Milwaukee, the Flint and Pere Marquette, and the Chicago Grand Trunk railways will sell round trip tickets at two cents per mile on presentation of the required certificate of identification. The Chicago and West Michigan railroad will sell tickets at same rates on application to station agents, without certificates. Certificates can be obtained from the secretary, George E. Ranney, M. D., Lansing. Those designing to read papers should send titles and time required for the reading to Dr. H. Tupper, Bay City, or to the secretary of the society.

His numerous friends will be glad to know that Professor E. W. Jenks, of Chicago, has been appointed by the Illinois State medical society as delegate to ours and will be with us at Bay City.

THE AMERICAN MEDICAL ASSOCIATION.—At its recent meeting in Richmond, this association passed the following resolution: "It is not in accord with the interest of the public or the honor of the profession that any physician or medical teacher should examine or sign diplomas or certificates of proficiency for, or otherwise be specially concerned with, the graduation of persons whom they have good reason to believe intend to support and practice any exclusive and irregular system of medicine."

We do not think that the passage of this resolution will add materially to the "honor and dignity" of the association. How many students, who all the while intend to practice irregular medicine, enter our largest and best schools every year? Many of the most unblushing quacks are graduates of good schools. A few months ago we had occasion to refer to a notorious cancer doctor of Milwaukee who graduated at two regular schools. If the above resolution is to be of any practical importance, medical teachers should bind by oath every student not to practice any irregular system, and should have the power of inflicting severe punishment for the violation of the oath.

Again suppose a young man enters the scientific department of Harvard or Yale. He studies botany, chemistry, physiology, anatomy, etc., and openly avows that he is taking such a course because he intends to study medicine and will soon enter the medical department of Boston University (a homœopathic school). His teachers, if graduates of medicine, would be prevented by the above resolution from examining the young man. In this controversy the American medical association has shown a spirit of bigotry and intolerance more in accord with the manner of the dark ages than with the enlightenment of the present century. In the passage of the above resolution, which was finally offeredas a compromise, the association has made itself an object of ridicule; for the resolution is a thing of emptiness and can never have any practical importance.

A JOURNAL FOR THE AMERICAN MEDICAL ASSOCIATION.—At the recent meeting of the association, Dr. Warren, of Boston, urged the establishment of an association journal. The papers read at the meetings of the association would be published in the journal and not in a volume of transactions as at present. Dr. Warren says that this suggestion has been bitterly opposed by the editors of the "numerous petty journals" of the country. We do not know why medical editors should oppose such an undertaking; for unless the papers should be much better than the average association paper, even the "pettiest" journal would have nothing to fear from such a rival. As one of our exchanges stated some years ago, the prize papers of the association are not unfrequently such as would be refused by a respectable journal. We dare say that if the president's address at Richmond had been sent, with the name, John Jones, M. D., Suckerville, Illinois, attached, to one of our best exchanges it would have found its way into the waste-basket. But we hope for better things next year. Dr. Woodward, an original investigator, will give the presidential address at St. Paul.

CORRESPONDENCE.

TRICHINA.

Professor G. G. Groff, of the University of Lewisburg, Pennsylvania, in THE PHYSICIAN AND SURGEON for March, calls attention to a case in which he in vain attempted to produce *trichiniasis* in a cat. This is an interesting and important fact. It shows that the feline species is not necessarily infected by being fed upon trichinous flesh. That they are sometimes infected the experiments of Leuckart and Cobbold place beyond question. The latter produced *trichiniasis* in two cats, and the former estimated that a single ounce of a cat's muscle, which he had fed upon infected meat, contained three hundred and twenty-five thousand nematodes. Leuckart also produced *trichiniasis* in the mouse which in Cobbold's hands gave negative results. It thus appears that some animals of a species, susceptible of infection, may take these parasites into their stomach without trichinæ being afterwards discoverable in their flesh. Are they really infected and has the parasite escaped observation, or is there a condition of the system such as to prevent the nematodes establishing themselves?

Cobbold's experiments show that the trichina will live in dogs, guinea-pigs, cats and hedgehogs. Davaine and Leuckart have added rats and rabbits, and Pagenstecher and Fuchs, the calf to the list. Also it may be said that experiments upon the sheep, goat, crow, goose and chickens gave negative results. In the intestine of some of these, the sexually mature animal was found, but in no case did the young appear encysted within the muscle. The trichina has also been reported as occurring in the hippopotamus and in fish. From these facts we see that the parasite thrives best in carnivorous mammals, is rare in the herbivora, and has apparently no proper place in birds.

The difficulty of diagnosis in some cases of *trichiniasis* may arise from the fact that nematodes may be present in considerable numbers and yet seemingly do no harm. This was not only true in the case of one of Davaine's rabbits, but Owen has instanced the case of a man who enjoyed robust health notwithstanding his body was extensively invaded by these parasites. After all is there not too much doctoring for entozoa? The Abysinians consider the presence of Tæniæ in their intestines essential to health. I have seen a child treated by a quack for "worms" when the real trouble was intermittent fever.

However, although a few entozoa may not be deleterious, excess is certainly hurtful. Moses was undoubtedly right in regarding the hog as unclean. Part of this uncleanness is owing to the nature of the animal, and the food upon which it subsists. If our swine are allowed to feed upon the excreta of many quadrupeds, they will of necessity take into their systems the germs of parasites contained therein. As a prophylaxis against disease the pig should be protected and given a more healthful diet than he often enjoys. W. H. SMITH, M. D.

SAINT CLAIR, MICHIGAN.

THE ANN ARBOR BOARD OF HEALTH.

On March 18, I was taken sick and sent for Dr. Herdman. He diagnosed my disease small-pox, and reported it, as required by law, to the Board of Health. Dr. Herdman's diagnosis was confirmed by Professors Palmer, Dunster, Maclean and Dr. Hendricks who visited me during my sickness. When the Board of health was notified of my case, after some delay, they sent a verbal notice of quarantine to my room-mate, Mr. Page, but with no request that it should be served on me by him, and, although the chairman of the Board visited me repeatedly, no such notice was ever given me. I understand the law and also the rules of the Board require that all such notices shall be served in writing, also that notices shall be printed in the papers, which was never done. It took a whole week to get even one small notice posted on the door which was all the public notice that was ever given. Dr. George, a member of the Board, declared in the presence of witnesses that I had "varicella" and said that I had not a sign or symptom of small-pox. Dr. Breakey agreed with Dr. George's diagnosis, but said to Dr. Herdman that "the authorities had decided it was small-pox and he would have to treat it as if it was." Other city doctors called on me, among them Dr. Smith, who stated that I had varicella.

I recovered rapidly from my illness and was able to be about the house in two weeks from the time I was taken. When the time came for my release the Board refused to set any time when I could go out, but said I must stay until my doctor would give them a certificate that I would expose no one. I asked Dr. Herdman for such a document, and he informed me that it did not belong to an attending physician to give such a writing, and that it was one of the duties of the Board of Health. In this way the case stood when the Board last visited me, I must either get a certificate or stay in forever.

I was feeling much better than before I was taken sick; weighed ten pounds more; skin seemed clear with the exception of a few red spots where the eruption had been, and, thinking I had the opinion of my physician and of the Board itself for that matter, that I would expose no one, I gave the Board thirty-six hours notice that I should stay no longer and left the city on the 30th day from the time I was taken. I was gone a week, and after I had been back nearly two weeks I was arrested, the complaint being made by the Board of Health. After an adjournment and examination was held May 14, resulting in the prosecuting attorney withdrawing the suit.

At the examination Dr. Smith, of this city, swore that he saw me at the Episcopal church in Ann Arbor on April 17; he swore that he was particular to inquire my name, also that he had quite a talk with me in reference to my sickness. Now at that very time I was in a neighboring city seventy-five miles away, and can bring at least one hundred people, who have known me for some years to swear to the fact. It seems preposterous, to say the least, that a man should identify another by oath whom he had seen but once before, and that at a time when those best acquainted with him would scarcely recognize him.

The Board of Health seem to have acted in this whole matter in a tricky, boyish manner, if they knew how to proceed in a legal way they were very careful not to do it. Their position in reference to the nature of my disease was simply ludicrous, declaring at first that I did not have small-pox they shifted from one side to the other, when it was for their interest to be on either side there you were sure to find them.

My arrest seems to have been prompted entirely by a spirit of revenge. I can attribute it to nothing else, as no cases of small-pox occurred from my visit or on my return to this city.

The Board of Health consists of Dr. W. F. Breakey and Dr. C. George, regular physicians, and Dr. Allen a professor in the homœopathic college of the University of Michigan. I am a student of the regular department of medicine and surgery of the University of Michigan. The two regular physicians of the Board have been at enmity with the regular school here professedly because some homeopathic students were once allowed to attend lectures in it. It is a strange spectacle to see them sitting on the Board of Health with a homœopathic physician apparently friendly in their manner, abusing their official power to persecute a student of the regular school. In this matter they were aided and abetted, I understand, by the secretary of the State Board of Health.

The Board of Health of this place have neglected their duty in the matter of protecting the health of the public, I am imformed, especially in cases of scarlet fever, which frequently raged in this city. They never attended to disinfecting clothing or even quarantining those affected and those nursing patients sick with this disease. Now does in not appear from the above facts that the Board have been guilty of criminal neglect of duty in other cases, and does it not seem strange that they should appear as complainants against a student who had committed no crime either morally or otherwise, and put him to the expense of defending his reputation and character against such an attack.

On account of the notices which have appeared in the papers in regard to this matter I have been induced to make this statement. There are many other equally interesting facts connected with the case, which I refrain from giving as people are connected with it who dislike to have their names appear in print. The above are the essential facts in the case, as far as I am concerned.

I am willing to leave it to a candid public to judge as to which party is in the right. C. A. SMITH.

ANN ARBOR, May 21, 1881.

TRANSLATIONS.

Translations from Russian Journals for THE PHYSICIAN AND SURGEON.
BY RALPH D'ARY, M. D., ROMEO, MICHIGAN.

PERFORATION OF THE INTESTINE BY A LUMBRICUS.

Into the Peterhof Palace Hospital there was admitted last August a peasant woman, seventy-two years old. She complained of deep-seated pain in the hypogastrium, which had lasted three days. Examination revealed nothing abnormal; but on forcible pressure on the abdominal wall the pain increased slightly. She had had no fæcal passage for three days, and did not feel any call. Temperature and pulse were normal. She received a common dose of castor oil and an anodyne liniment was applied to the right inguinal region, where the pain was located. After the bowels had been relieved she felt so much better that she wished to return home. But as the same pain still remained, though in a lesser degree, it was determined to detain her until complete recovery. On the fourth day after her admission her temperature rose to 38°, and near Poupart's ligament there appeared a pinkish, indurated swelling. Five days later, and after the temperature had gradually risen to 40.2°, the abscess burst, about two fingers' breadth below Poupart's ligament, internally to the large vessels, and discharged a great quantity of liquid dirty looking pus. Since considerable purulent infiltration had taken place in the fold of the nates, parallel to the labium majus, a dependent counter incision was made in this place. After that the temperature fell to the normal point, and the patient's general condition became quite satisfactory. One morning, while the dressings were being changed it was noticed that a peculiar ringlike body protruded from the opening of the abscess. This proved to be a lumbricus, the head and tail being retained in the wound. When removed and measured it was found to be about six inches long. The next day some gray intestinal mucus was found on the dressing, and when pressure was made on the hypogastrium, alternately from right to left, the intestinal gases escaped with rather a loud squeaking sound. A rubber tube, fastened to a common syringe was introduced pretty far upward and inward and when water was injected, it entered the intestine with the characteristic gurgling, and could not be pressed out again. The intestinal gases escaped yet for three or four days, on pressure, but the mucus did not exude any more, and fæcal matter was never noticed. In the cavity of the abscess could be seen the tendon of the abductor longus. In due time granulation filled it and the patient recovered without accident, notwithstanding her advanced age, and the dangerous character of the lesion.—Petrovsky, in *Vratsh.*

CHLORAL HYDRATE IN SEPTICÆMIA.

Résumé of a dissertation
BY MR. G. TARASSEVITSH.

In order to ascertain the properties of chloral as an antiseptic, the author made the following experiments.

(1) He injected subcutaneously, into animals, a mixture of equal parts of a two per cent solution of chloral and septic fluids.

(2) He injected the septic fluid only, and sometime afterwards gave an aqueous solution of chloral by mouth or per rectum.

For the *controlling* experiments he took dogs, in size and weight as similar as possible to the two series before mentioned, and injected equal quantities of septic fluid, *without* using the chloral.

The results he arrived at are the following:

(1) The effect of the septic poison is undoubtedly controlled by the chloral hydrate.

(2) In those animals which were given chloral, the abscesses formed from the injection of the septic fluid generally contained laudable pus, free from any smell. The ulcers which formed at the punctured places granulated rapidly under the local application of a two per cent. solution of chloral. Even after one ablution their fundus assumed a pink color and was rapidly covered with healthy granulations. They also secreted a much smaller quantity of pus than in those animals who received no chloral. Gangrenous destruction of tissue, which occasionally took place around the puncture, was considerably more limited in the animals that received the chloral.

(3) Under the influence of chloral the septic fever which followed the injection of the septic fluid, ran a much milder course, the increase of temperature being of much shorter duration, and the condition of those animals presented a marked difference from those which, being used to control the experiments, received no chloral. Those treated with chloral did not lose so much weight, and also recovered much quicker than the latter.

(4) Chloral hydrate not only serves as a prophylactic to septicæmia, but is a potent antiseptic in cases of septicæmia fully developed, "destroying the lower organisms—the main factors of the infection."—*Med. Obozr.*

DIPHTHERIA.

I.—Professor Lashkevitsh has carefully tried, in the Harkof Hospital, the effect of pilocarpin in diphtheria, the remedy so enthusiastically recommended by Dr. G. Gutmann in the *Berl. Klin. Wochenschrift,* Number XL, and by others, as a specific. He set aside, in the above hospital, ten grave cases of the disease, as the only ones suited to establish a remedy as a specific, since the lighter cases of the disease yield to a variety of remedies. The pilocarpin was given in the formula prescribed by Dr. Gutmann, and although it fully displayed its usual physiological effects, it was found to be *absolutely* useless, not only in controlling the disease constitutionally, but even in removing the exudates. All the ten patients died. The full and detailed clinical record of each case is given by the professor in *Med. Vestn.*

II.—Dr. Basse writes in substance, (in the *Berl. Klin. Wochenschrift,* 1880, Number XLIII), the following:

To a ten year old boy, suffering from diphtheria, who displayed strong symptoms of stenosis of the larynx, about three drachms of oil of turpentine were given by mistake, it having been prescribed for the purpose of disinfecting the air. The child was at once made to drink about half a pint of milk. At first he was rather restless, but soon he fell into a comparatively quiet sleep. The cyanosis and frequency of respiration, produced by the disease, decreased. The next day the diphtheritic exudation, which had firmly adhered to the tonsils, appeared loosened, and was easily removed with a swab. The patient soon recovered. There was no inflammatory reaction either in the alimentary canal or genito-urinary organs.

Since that time B. has used oil of turpentine in twenty-three grave cases of diphtheria, in children varying in age from two to twelve years. He gave, according to age, at one dose from two to three drachms of pure oil of turpentine, pinching the nose at the time, and giving them a quantity of cold milk to drink after. The affected parts were swabbed every two hours with a five per cent solution of chlorate of potash in limewater, with the addition of syrup bals. Peruv.; warm compresses were applied to the neck, and small pieces of ice were given the patients to suck. Generally a loosening of the exudates took place after the first twenty-four hours from taking the turpentine. In some cases of ten to twelve year old patients, another, slightly smaller dose of the same remedy was required. All the twenty-three patients recovered in a very short time. The remedy was well tolerated, vomiting taking place only in one case.

The same remedy, in doses of about fifteen grams for children from five to fourteen years of age, also proved in B.'s hands an excellent remedy in six cases of scarlatina, with diphtheritic complications—the exudate soon became loosened and the eruption paled and disappeared. Dropsy did not occur in any one of those cases.—*Med. Obozr.*

ELECTRICITY IN INCARCERATED HERNIA.

Dr. Bronstein writes in the *Vratsh:* On November 24, I was called to a tailor's, from whom, according to his wife's statement, "all the inn'ards had come out." I found an incarcerated scrotal hernia of the right side. The patient had suffered several years from this hernia, which, however, had always spontaneously re-entered the abdomen when he assumed the recumbent position. This time, however, it had not done so. Neither had it yielded to the efforts of the barber who had manipulated it for five hours. The patient was thirty-eight years old, of weakly constitution. His face was pale and anxious, the abdomen flattened, and the pulse small and frequent. He had pain in the abdomen and scrotum, and frequently vomited liquid matter, tinged with bile. The scrotum was distended almost to the size of a child's head, the subcutaneous veins being sharply defined. The abdominal ring embraced the intestine so tightly that there was no possibility of raising it. I tried manipulation for one hour without success, then chloroform, ether, the warm bath, clysters, etc. In accordance with Perier's advice I tried gravitation, by partly raising the patient by his lower extremities. I forcibly injected large quantities of water, but all to no purpose, and I made up my mind that herniotomy would have to be performed—a most formidable operation under the existing circumstances, in a dark and dirty hovel, without assistants, and with Listerism not even to be thought of—circumstances that so frequently surround the country doctor in a far-off wilderness. I decided to wait till evening, however. The patient meanwhile had rapidly grown worse; he was more exhausted and there were evident symptoms of hemostasis in the region of the hernia. At this time it occurred to me to try electrisation. I had a Ruhmkoff helix, and applied the two electrodes to the two sides of the scrotum. In less than two minutes the intestine retreated into the abdomen, with the usual characteristic gurgling. This means might be worth trying in other similar cases.

ABSCESS OF BARTHOLINI'S GLAND.

BY W. WASTEN.

Cystic abscess of the vulvo-vaginal gland itself or of its excretory duct is not uncommon and is a very unpleasant affection, depriving the patient for some time of the ability of locomotion. Some patients, unfortunately, are subject to many attacks in succession, with but short intervals between, this condition continuing, occasionally for several years. In these latter cases a simple incision is generally insufficient for a radical cure. To effect this it has been proposed to remove a part of the wall of the abscess and to cauterize the cavity of the abscess, finally inserting a tampon. As another means of cure it has been proposed to enucleate the whole gland. Both these methods have the inconvenience that after their employment the patient is compelled to spend some time in bed, otherwise it is difficult to retain the tampon in its place, or to insure a healing by first intention of the wound. Besides this, either method results in a more or less normal disfigurement, as it is unavoidable to remove a part of the mucous membrane and some of the cellular tissue. Churchill is the only one who has propoposed an incision with subsequent introduction of a seton.

About five years ago, I treated my first case of this nature, the patient being up all the time. Since that time I have radically cured three more cases, without a necessity of my patients taking to their beds. I, therefore, will describe my plan of treatment by relating the history of one of those cases:

Mrs. U. had for eighteen months suffered almost constantly from recurrent abscesses of the excretory duct of Bartholini's gland of the left side. When I examined the abscess it was of the size of a hen's egg. I opened it by two small incisions, at its upper and lower parts. Through these incisions I introduced a small drainage tube, the ends of which I then tied together. The cavity of the abscess was then regularly syringed out, and tincture of iodine was injected from time to time. In about one month the cavity had disappeared, there remaining only a canal where the drainage tube lay. After the latter had been removed this canal continued, for a short time to secrete a purulent discharge and finally healed up. In shape the external parts presented no difference from those of the other side, and only in the former position of the drainage tube could be felt a thin cord of cicatricial tissue. The abscess did not recur.

This plan of treatment presents the following advantages: The operation leaves no cicatrix or disfigurement of the parts, and, which is more important, the patients during the time of treatment, are able to follow their usual occupation, not being obliged to keep their beds. For the drainage tube occasions no discomfort whatever. One patient was able to dance one week after its insertion.—*Sovr. Med.*

Translations from German Journals for THE PHYSICIAN AND SURGEON.
BY M. E. PAGELSON, GRAND HAVEN, MICHIGAN.

THE VALUE OF INORGANIC SALTS IN THE NUTRITION OF ANIMALS.

The value of inorganic salts in the nutrition of animals is essentially different from the value of nutritive material of organic origin. The organic foods are the origin of the potential force of the body, which by its breaking up and oxidation is changed into the forms of dynamic force which produce all the functions of the animal. The organic foods then serve the animal body primarily by their change, and the necessity of their continual renewal is, therefore, not only a matter of experience but a self-evident fact. It is entirely different in the case of the inorganic salts. These, already in the highest state of oxidation when introduced into the system, can for this reason not be further oxidized, can in no way be used up. It is, therefore, at first not easily seen why they should need to be continually renewed. It is easily imaginable that the adult organism, if only organic pabulum is brought to it, can retain the amount of inorganic salts already present, and preserve the normal construction of the tissues. At any rate it might be expected that, even though a small part of the salts were gradually lost, still the amount already present would last a very long time.

The question can be fully decided only by experiment. Until recently attempts of this kind have only been made by Forster. He fed dogs and doves on fat, starch and the residues of meat, obtained during the preparation of Liebig's beef extract, which before administering, he washed several times in hot water. These experiments showed the surprising result that the animals died very soon, and, as it seemed, even sooner than when entirely deprived of food. From this Forster drew the following conclusion: "The animal organism, whose tissues are otherwise in equilibrium, needs for its maintenance the introduction of certain salts. If this introduction sinks below a certain limit or is entirely cut off, the system gives up certain of the salts which it already possesses and is thereby destroyed."

But, in the "Zeitschrift für Biologie," Number X, page 130, Dr. G. Bunge called attention to the fact, that Forster, in the explanation of his experiments, had left entirely unnoticed a very important point, the formation of free sulphuric acid from the sulphur of the albumen.

Albumen contains one to two per cent. of sulphur. During the breaking up and oxidation of the albumen the greater part of the sulphur is changed into sulphuric acid. In the normal condition this sulphuric acid combines with the basic salts which all foods contain. But if, as in Forster's experiments, these basic salts are extracted from the food, we must naturally expect that, in just the proportion in which it is formed, the sulphuric acid will take from the tissues of the organism their basic constituents. This change in the normal structure of the tissues would seem to be the most probable cause of the rapid destruction of Forster's animals.

It was proposed to me by Dr. G. Bunge to prove experimentally the truth of these conjectures. I chose the mouse as my experiment animal, because in selecting them one has the advantage of being able to experiment on many at the same time, since their small size occasions no difficulty in obtaining the necessary amount of food. Of course only full grown mice were selected. They were kept in separate cages made of heavily tinned wire, with a floor of ground glass, from which they could easily be picked up for cleaning purposes. The doors were so arranged that there was no difficulty in letting the mice pass from one cage into another. Their food, consisting of coagulated, and then well washed, milk and of cane sugar, was given the mice in small glass vessels. Their drink was distilled water.

The food was prepared in the following manner: The milk was diluted with water, to one and one-half or two times its volume and then enough acetic, acid was added until a decidedly acid reaction was obtained. Milk so prepared coagulates in very small flakes. The coagulum was washed twice in water containing acetic acid, and then twelve to fifteen times in distilled water, by decanting. It then consisted of about equal parts of casein and fats, and contained, according to estimates of several different preparations, only 0.05 to 0.08 per cent. of ash. The substance used to determine the amount of ash was first dried at 120° centigrade. The results of the analysis were the following:

Grams.		° C.		Grams Ash.		Per Cent.
10.7262	dried at	120	gave	0.0069	or	0.065.
10.1992	dried at	120	gave	0.0066	or	0.064.
9.53	dried at	120	gave	0.0049	or	0.052.
7.4988	dried at	120	gave	0.0062	or	0.08.
2.5124	dried at	120	gave	0.0017	or	0.07.

If the milk is too much diluted with water, as Hoppe-Seyler directs to do in determining the amount of casein, or if only enough acetic acid is added to make the mixture neutral, the milk coagulates in large flakes, which are difficult to wash. Although this food was not entirely free from ash, still it contained much less than the food mixture which Forster used. The ash of his meat residues amounted to 0.8 per cent., or ten times as much as that of the milk coagulum used in my experiments. For a carbo-hydrate, the mice were given cane sugar, which on being analyzed, gave quantities of ash so small that they could not be weighed.

For a sleeping place, glass vessels filled with cotton were put into the cage. The cages stood in a quiet place, in a room of an even temperature and were washed daily. The cotton was changed as soon as it was in the least soiled. Under these circumstances, mice can live a long time with proper food. So, for instance, two mice which were only fed milk lived two and one-half months in captivity, and when I had finished my experiments were set free in a perfectly healthy condition. Of four mice which only received distilled water, two lived three days each and two each four days. Five mice, fed on the above mentioned, almost ash free food, lived eleven, thirteen, fourteen, fifteen and twenty-one days respectively.

After we had determined about how long the mice were able to live on this food, we began to test the effect of sulphuric acid. The amount of sulphur in casein was taken as 1.5 per cent. and so much pure sodium carbonate was added to the food that there was one equivalent of sodium for each equivalent of sulphur, so that, therefore, although all the sulphur were changed into sulphuric acid, only the acid salt and not free sulphuric acid could be formed. Six mice, fed on this food, lived sixteen, twenty-three, twenty-four, twenty-seven, thirty, and thirty-six days respectively. If we compare these figures with the previous ones, the longer life of the mice fed with sodium carbonate will at once be noticed.

Now this objection could be made: The animal lived longer, not because of the neutralization of the sulphuric acid, but principally because they received a salt in their food. To meet this objection, I then gave to seven mice just the same amount of sodium for their food, but this time as sodium chloride, hence as a neutral salt which cannot take up any more acid. Now the mice received two ingredients of ash, sodium and chlorine, and ought, if our theory were not true, to live longer with them than with one, the sodium alone. The figures obtained in this experiment were six, ten, eleven, fifteen, sixteen, seventeen and twenty.

The mice, then lived a shorter time with sodium chloride, with two ash components, than with one, and not longer than when fed on food free from ash. The action of free sulphuric acid seems, therefore, to be the cause of the early death.

Upon adding sodium carbonate, their life lasted twice as long as without this addition but still was noticeably short. Therefore the following experiments were made to determine whether the animals could live on the same foods with an artificial addition of salts. In manufacturing this salt mixture, I took the averages which Dr. G. Bunge found in his analyses of milk, and to fulfill all the demands added besides some calcic fluoride. In computing the amount of salts to be added, I followed the averages of the various analyses of milk, which Gorup-Besanez has gathered in his "Lehrbuch der Physiologischen Chemie." The average amount was four grams of ash in one hundred grams of dry substance. With the food prepared in this way I fed six mice and obtained the following figures—twenty, twenty-three, twenty-three, twenty-nine, thirty, and thirty-one days.

The fact, that in spite of all the salts, the mice did not live longer than with sodium carbonate alone, increased my suspicions that the mode of life and the sameness of food were not favorable for the mice, and that these alone were sufficient to cause death. There now remained only to give to the mice the pure milk, under the same conditions of life, in order to see whether or not they were able to live on this food.

For this purpose I at first fed a number of mice only fresh milk. But milk soon coagulates in such small vessels at the temperature of the room, to which is added the contamination of the same by the mice, and all my mice died in a few days. Whether now the cause of death was the lactic acid which in proportion to the body weight was ingested in too large quantities, or was some thing else, I will for the present leave undecided. To prevent the souring of the milk, I evaporated it on the water bath almost to a solid, and fed the mice on this condensed milk. Out of three animals which were fed with this, one died after forty-seven days, but showed on dissection all the appearances of intussusception. The two others lived in confinement two and one-half months, increased considerably in size, remained bright and when I discontinued my experiments were set free, perfectly healthy, bright and well nourished.

The mice then, could very well live under these conditions with suitable food, but since they could not live on albuminates, fats, sugar, salts and water, as the above experiments show, it follows that, beside the casein, fats, milk, sugar and salts, there must be other substances present in the milk, which are indispensable to nutrition. To trace these substances and to fix their importance in nutrition would be an investigation of great interest.

The organic combinations of phosphorus were not completely washed out, as was to be expected from the proportional solubility of lecithin and nuclein, for a quantitative analysis of phosphoric acid in 6.5 grams of the dry substance gave 0.005 grams of phosphoric acid, or 0.076 per cent. The percentage of the entire amount of ash ranged between 0.05 and 0.08 per cent., consequently besides the salts of phosphorus there must have been organic combinations of phosphorus. The estimation of phosphoric acid was made by burning with saltpeter, precipitating with molybdate of ammonia, dissolving in ammonium hydrate and reprecipitating with a magnesia mixture.

The cause of the death of the mice, which had received all the salts may be sought in this, that the normal combinations of the organic and inorganic constituents were destroyed by coagulating and leaching. It is possible, also, that the milk sugar ought not to be replaced by cane sugar. Experiments in this direction are desirable.

To ascertain the truth of the theory about the action of sulphuric acid in taking away the alkalis, I undertook a series of experiments in which everything remained just as in the previous ones, only that instead of sodium carbonate and chloride, equivalent amounts of potassium carbonate and chloride were used. With potassium carbonate I obtained the following figures: Sixteen, eighteen, twenty-four, twenty-five, eighteen, thirty-two, and thirty-five, and with the chloride, seven, thirteen, thirteen, fourteen, ten, thirteen. These figures again confirm our supposition, for here, too, the animals lived longer with one ash component than with two.

Here I would call attention to the fact that these results are directly opposite to Kemmerich's view, *Pflüger's Archiv*, Number II, Seite 79, who ascribes to the salts of potassium more importance in nutrition than to those of sodium.

These experiments should be so conducted that, instead of the carbonates of sodium and potassium, some other substance be used which has the properties of a strong base and is entirely neutral in regard to the animal organism. Such a substance would ammonium carbonate be, or creatinin, which, as is well known, is not changed in the animal body. It is to be desired that the experiments be repeated with these modifications.

The previous experiments were so conducted that the sulphuric acid was neutralized with only one equivalent of sodium. The following ones were to decide how the animal would behave if more sodium carbonate were added to the food. In this series of experiments twice as much sodium carbonate was added to the food as in the previous ones, and the following figures were obtained: With sodium carbonate, eleven, twelve, thirteen, fifteen, eighteen and twenty-one, and with the chloride, six, eleven, five, fifteen, fifteen. That these animals died sooner than those in the previous series of experiments may be thus explained, that the sodium salt removed the other salts from the tissues by its overwhelming influence. When the amount of sodium salt used was still increased, the animals were yet sooner destroyed.

It seems to me that the experiments mentioned throw some light on the question of the origin of urea from ammonium carbonate. If this is introduced into the organism of mammals it is changed into urea. But it does not yet follow from this that under normal conditions also ammonium carbonate is the progenitor of urea. If this were the case, if the albuminates were broken up in the animal body in the same way as outside of the organism during putrefaction, so that the great mass of nitrogen came out of the process of disintegration in the form of ammonia and was only changed into urea afterwards, then, plainly, there would always be sufficient material in the organism to satisfy the sulphuric acid, and it could not be understood how, in the above experiments, the carbonates could have served to prolong life. The above experiments seem to speak for it, that either the urea is separated from the molecule of albumen as a neutral combination, or that the formation of ammonium carbonate and of sulphuric acid does not take place in the same part of the system.—*N. Lunin.*

Translations from French Journals for THE PHYSICIAN AND SURGEON.

BY P. E. NAGLE, M. D.,

Assistant to the Professor of Pathology and Practice of Medicine, and Assistant in Qualitative Chemistry in the University of Michigan.

INVESTIGATIONS CONCERNING THE THERAPEUTIC AND PHYSIOLOGICAL ACTION OF BROMIDE OF ETHYL IN EPILEPSY AND HYSTERIA.

The bromide of ethyl, $C_2 H_5 Br.$, has been successively used as a general anæsthetic by Nunnely (1865), Turnbull, of Philadelphia (1877), and by Levis in 1880. More recently still Dr. Terrillou endeavored to introduce it into general surgical practice, claiming that it is free from many of the dangers attending chloroform. According to him, the bromide of ethyl does not cause syncope nor vomiting which so frequently occurs after chloroform narcosis. He also claims that the patient recovers more rapidly from its effects than from those of chloroform.

The history of bromide of ethyl and its employment as an anæsthetic has been so long and so recently discussed, that it is not necessary to recur to it here. It may however be stated that an erroneous estimate of its use as an anæsthetic is often due to the fact that the commercial bromide of ethyl is frequently impure and mixed with related compounds, which give it a disagreeable odor. This is the usual liquid successfully used as a local anæsthetic, but when it is used by inhalation the patient is taken with violent coughing, sneezing and crying, and its use must be suspended.

For several years chloroform, nitrate of amyl, ether and the valerianates of amyl and ethyl have been employed to combat the convulsive symptoms of hysteria and epilepsy. Although the convulsions incident to these diseases may be abated, or the duration of the convulsion diminished by the use of the remedies just mentioned, the number and severity of the attacks, and the progress of the disease, are not at all, or but very rarely affected. Thinking that the new anæsthetic might yield better results, we made some experiments with it. We tried it for two months on some epileptic and hysterical patients, who were in the Bicêtre. Ten epileptics, of whom five were adults and five children, received daily inhalations of the remedy; to eight other patients it was administered at the moment of the hysterical attack or at the access of the epilepsy. In this way about five hundred experiments were performed, the principal results of which we presented to the Biological society. (*). The modifications of the various physiological functions, respiration, circulation, temperature and secretions, in fact all the symptoms caused by using it, were carefully noted. The remedy was always administered by means of a compress (*compresse*), the patient being in the dorsal decubitus as for surgical anæsthesia, the doses did not exceed ten or fifteen grammes, poured gradually on the compress.

Physiological Properties.—The physiological action of bromide of ethyl on man and the lower animals has been already carefully studied by M. Terrillou,(†) and save some points that we shall indicate, our experiments confirm his. According to M. Terrillou, in anæsthesia from bromide of ethyl the pupils are at first dilated without any tendency to contraction, there is no cough. There is no period of tonic convulsions, and muscular relaxation comes on at the end of a few minutes.

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*See *Progrès Médical*, 7 August, 1880, and THE PHYSICIAN AND SURGEON, page 413, Volume II.

†*Bulletin Generale de Therapeutique*, April and May, 1880.

These phenomona did not always result in our experiments. In some cases the pupils were found to be widely dilated at the end of the inhalation; at other times they were found to be contracted, while in still other instances there were alternations of contractions and dilatation. Thus it will be seen that in this regard their effect is not constant.

Cough supervened in some cases, especially in adults, but in none of these it did not come on with every inhalation. We did not observe any period of muscular contraction, unless a certain projection of the extremities which occurred at the beginning of the inhalation be termed such a period, but this projection lasted at times until the awaking. It was but seldom that even after inhalation for ten minutes that complete muscular resolution occurred, Finally, cutaneous anæsthesia was inconstant and frequently incomplete. It should be remembered that our experiments were performed on epileptics and hysterical persons, and that the individuals experimented on were thus in different conditions from those of M. Terrillion. The following are some of the chief modifications in physiological conditions:

Temperature.—Of a total of twenty cases in which the temperature was noted during the inhalation, in three cases there was a rise of temperature, and in three there was a fall of some tenths; these variations never exceeded one-half a degree. Immediately after the inhalation the temperature returned to its normal state, and often it did not vary at all during the experiment. On the whole, it must be admitted that bromide of ethyl has no notable influence on the temperature.

Circulatory Apparatus.—There was nothing special observed in the action of the heart. The *pulse* in all the subjects and in all the experiments, almost without exception, presented a slight increase; five times only was there observed a slowing; in no case did the pulse variation exceed ten beats. The quality of the pulse did not vary much; it was neither small, irregular, nor intermittent. Two or three minutes after beginning the inhalation there was a decided conjestion of the face. Like the pulse, the *respiration* was almost always accelerated; but it was never notably impeded by the accumulation of mucosities in the pharynx.

Nervous System.—There was loss of consciousness at the end of one to three minutes; anæsthesia, more or less marked, at the end of three or five minutes—becoming greater as inhalation continued—but it was scarcely ever absolute. In the great majority of cases muscular relaxation was not complete.

Secretions.—The lachrymal secretion was very abundant in almost all cases. The urine was not varied in quantity, nor did it contain albumen or sugar.

General Condition—Weight.—The appetite was conserved, and the general nutrition did not appear to suffer in the least during the treatment, the inhalation lasting from five to fifteen minutes every morning for two months. At the end of this time the five children experimented on, and whose ages were from twelve to sixteen years, showed an increase of weight varying from one to nine kilogrammes. If, according to Quetelet, it be admitted that at this age the physiological increase in weight is four hundred grammes per month, it will be seen that the development was not at all impeded by the treatment. Of the ten patients experimented on, two were affected by rigidity of the extremities, accompanied by trembling, during the last fifteen days. Hardly had the inhalation begun, when the upper extremities became stiff, then the inferior and finally both extremities were affected by trembling, which was most marked in the upper, and was equal on both sides. From the day it first came on till the close of the experiments this phenomenon invariably occurred in two patients.

Action on the Attacks of Hysteria.—This remedy administered in several attacks to five hysterical patients of the Bicêtre and of the Saltpêtriere has almost always lead to a cessation of the convulsive phenomena, and several times, in two patients, caused the rapid passage of clonism into delirium. We observed this fact several times in the Bicêtre, in patients who were subject to a series of hysterical attacks (vague abdominal spams strangulation, tonic, and clonic convulsions, arc of a circle, etc.); hardly had the compress remained on their mouths a few seconds, when resolutions supervened and soon the period of delirium; it had, in fact, aborted the attack. At times the crisis terminated thus without other symptoms, but often after a respite of some minutes, a new attack came on with an epileptoid phase, severe convulsions, etc., if this was controlled in the same way as the previous attack, it terminated generally by weeping or sighing, more rarely by irrepressible laughter accompanied by delirium. Ten minutes or a quarter of an hour afterwards, the patient had completely come to himself and was able to walk alone.

Action on the Access of Epilepsy.—The administration of bromide of ethyl at the moment of access, could not be tried, but with a limited number of patients and the results obtained, have been extremely different. Inhalation begun in the tonic period, in three cases, produced muscular resolution in a few seconds; in other cases the duration and intensity of the convulsions were diminished; while in other cases this medication had no appreciable effect. To the latter category belong, for example those cases where the access came on during the treatment; in such cases the dose was increased, but the attack followed its usual course without the least modification.

Action on Epilepsy.—Of ten epileptics, of whom five were adults and five children, subjected during two months (June and July, 1880) to a daily inhalation pushed to anæsthesia, and in several cases prolonged for twenty minutes, five presented in June a considerable diminution in the number of attacks; from four to forty-one attacks less than in May. This difference was increased during July, there being twelve to eleven attacks less than in June. The comparisons with the preceding years give results a little less favorable. Thus in June, 1880, seven patients of ten, had two to fifty-nine attacks more than in June 1879; three of ten had from twenty-one to thirty-nine attacks less. For July 1880, the proportion is reversed; seven patients of ten had had eleven to fifty-five attacks less than in July 1879; the three others one to thirty-four attacks more. Notwithstanding these contradictions, it remains evident from the ratio that bromide of ethyl exercises a certain action on the progress of epilepsy. Four of the patients thus treated, of whom three were children, died in the epileptic state, two in July, the third in August and the fourth in September. Another, an idiotic epileptic, was attacked in July, in the course of treatment, with feebleness of the lower extremities, fever and anorexia; some days later a complete paraplegia supervened. No convulsions had been noted; the paraplegia has gradually diminished, and now (March 1881) the child can walk if supported by the arm. His general condition is otherwise good; there is no deformity, nor change in the volume of his limbs, which are quite large. Are these effects to be attributed to the bromide of ethyl, or in other words is it a toxic paraplegia? We cannot say. Nothing special was noted in regard to the other five patients.

We believe we are justified in drawing the following conclusions:

(1) The dilitation of the pupil at the beginning of the inhalation of bromide of ethyl is not constant.

(2) Complete muscular resolution is exceptional.

(3) The anæsthesia produced is of variable degree according to the subjects.

(4) The temperature, the secretions and the general condition do not suffer any modification.

(5 The pulse and respiration are slightly accelerated.

(6) It may produce a more or less marked trembling of the extremities during the inhalation, but these symptoms do not continue after recovery from the effects.

(7) Hysterical attacks are in general easily arrested by the bromide of ethyl.

(8) The access of epilepsy may at times be stopped by giving the remedy during the tonic period; oftener the inhalation is without effect.

(9) In epilepsy, the regular use of bromide of ethyl administered by daily inhalation for a period of two months, diminished very notably the number of attacks.—Bourneville and H. D'Ollir in *Progrès Médical.*

BOOK REVIEWS.

A TREATISE ON BRIGHT'S DISEASE AND DIABETES, WITH ESPECIAL REFERENCE TO PATHOLOGY AND THERAPEUTICS. By James Tyson, A. M., M. D., Professor of General Pathology and Morbid Anatomy in the University of Pennsylvania, etc., etc., with illustrations. Including a section on Retinitis in Bright's Disease, by William F. Norris, A. M., M. D., Clinical Professor of Ophthalmology in the University of Pennsylvania. Philadelphia: Lindsay & Blakiston, 1881. Cloth; pages, 310. For sale by Sheehan & Co., Ann Arbor.

For the latest and best information on the subject covered by the title, we recommend this work. We are no longer compelled to go to European writers for our information on Bright's disease. Professor Tyson is a man of extensive experience and accurate observations and we have here the result of his labors for many years in his speciality. The table of contents embraces the following subjects: (1) Structure of the kidney; (2) Testing for albumen—albuminuria, its sources and mechanism of its production; (3) Casts of the uriniferous tubules—their nature and clinical significance; (4) Classification of Bright's disease; (5) Acute parenchymatous nephritis; (6) Chronic parenchymatous nephritis; (7) Lardaceous disease; (8) Interstitial nephritis; (9) Retinitis; (10) Suppurative interstitial nephritis; (11) Cyanotic induration; (12) Diabetes mellitus; (13) Diabetes insipidus.

GENERAL PHYSIOLOGY OF MUSCLES AND NERVES. By Dr. I. Rosenthal, Professor of Physiology in the University of Erlangen. With seventy-five wood-cuts. New York: D. Appleton & Co., 1881. Cloth; pages, 324. For sale by John Moore, Ann Arbor.

A work written by a master in the science, and written so plainly that all may comprehend its teachings. Our knowledge of the physiology of muscles and nerves has made so many advances and so many changes in the past few years, that even among physicians there is gross ignorance on the subject. Too frequently do we see mistakes arising from this ignorance marring many otherwise well written and valuable articles in medical journals. The physician who desires to post himself on this matter can do so with pleasure and great profit from the work now before us.

A MANUAL OF THE PRACTICE OF MEDICINE DESIGNED FOR THE USE OF STUDENTS AND THE GENERAL PRACTITIONER. By Henry C. Moir, M. D., New York. Price, $2.50. For sale by Sheehan & Co., Ann Arbor.

This handy little volume of four hundred and forty-pages fairly accomplishes the object for which it was written. This object the author describes in the preface where he states that:

"It has been designed chiefly to aid the medical practitioner and student in refreshing [their remembrances of], the pathology, etiology, symptomatology, differential diagnosis and treatment of the more important diseases." The student preparing for examination will find in this volume an invaluable aid, and the "busy practitioner" will, if he takes time, find in it the leading symptoms and diagnostic points of the most common diseases, brought out so sharply and briefly, that they can not fail to impress themselves on his mind, and thus render his practice more satisfactory to his patients and himself. The table of differential diagnosis between the five principal eruptive fevers is well arranged and exhaustive, and would grace the pages of a more ambitious volume.

A TEXT-BOOK OF HUMAN PHYSIOLOGY, DESIGNED FOR THE USE OF STUDENTS AND PRACTITIONERS. By Austin Flint, Jr., M. D., Professor of Physiology and Physiological Anatomy in the Bellevue Hospital Medical College, etc., etc. Illustrated by three lithographic plates and 313 wood-cuts. Second edition, revised and corrected. New York: D. Appleton & Co. Cloth; pages, 978. Price, $6.00. For sale by John Moore, Ann Arbor.

Professor Flint's text-book on physiology is already widely and favorably known to the profession. It is almost an encyclopœdia on the subject. The present edition contains the following important additions and alterations: The author's new experiments on the "respiratory sense" are described. The recent experiments of Pavy on the elimination of urea; a brief description of the phonograph; a clear statement of Pfluger's "law of contraction" have been added. The author's views of the "safety valve" function of the tricuspid valve have been modified, and the slight errors found in the former edition have been eliminated or supplanted by more recent and more accurate information.

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Saint Nicholas for June has reached us and maintains the reputation that it has as *the* magazine for boys and girls.

SCRIBNER'S for June. Scribner & Co., 743 Broadway, New York. Subscription price, $4.00; single number, 35 cents.

One of the best traits of *Scribner's* is that which, for want of a better name we may term the timeliness of its articles. We could mention many instances of this trait, but will content ourselves with calling our readers' attention to the contents of this number. The articles on "The Revised New Testament," "Lord Beaconsfield," and "Farragut" are, apart from their intrinsic worth, of special value at this time. Everybody is now criticising and reading the revised testament; Farragut's momument has recently been erected in Central Park, New York, and Lord Beaconsfield's great rival has but just told Englishmen how much they have lost in that great statesman's death. These articles are not by any means the *only* valuable ones in the June number of *Scribner's*, but these will do for a sample.

SELECTED ABSTRACTS.

TREATMENT OF DIPHTHERIA.

Dr. G. Hayward Coburn, in the *Philadelphia Medical Times*, says: "I prescribe—and it will strike the reader as nothing new—tincture ferri chloridi with potass. chlor. Doubtless, thousands of physicians use the same drugs, but as far as my knowledge extends comparatively few give as large a dose, and with as great frequency which supposition is my only reason for writing this paper. I give to a child twelve years of age the following:

℞.	Potass. chlor...	ʒj.
	Tr. ferri chlor....	℥ ss.
	Glycerinæ..	℥j
	Aquæ. q. s., ad..................................	℥iij.

S. One drachm every half hour.

It will be seen that these doses are large and frequent, but in them I am persuaded lies the secret of success. The first few doses often cause vomiting, but this soon ceases and the stomach bears it well. The frequency of the dose may be diminished after the first twenty-four hours if the symptoms indicate it. Locally, a one to twenty solution of carbolic acid may be used with an atomizer. Supporting treatment is used in the latter stages. But the sheet anchor is to be found in the large doses of tr. ferri chlor. and potass. chlor.

EXAMINATION PAPERS.

Topics given by the State Board of Medical Examiners to candidates for graduation in the department of medicine and surgery of University of Michigan.*

ANATOMY AND PHYSIOLOGY—*TOPICS*.

1. Give the anatomy of either of the lateral halves of the *neck*, including the different triangles and their boundaries; also, the vessels, nerves and glands found in each.

2. Give the anatomy of the organs of respiration; and also, the circulation and æration of the blood.

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*In these written examinations, one-half day is given to each branch. The board also examined the students orally.

3. Give the anatomy of the liver, describe its system of circulation, the hepatic vessels and the secretion of bile.

4. Give the anatomy of the kidneys and their nerves; and tell how they are supplied with blood, and in what manner they secrete the urine.

5. Give the anatomy and variety of the following articulations, namely, elbow, hip, knee and ankle, and the tissues involved in their dislocations.

MATERIA MEDICA—*TOPICS.*

1. Name some of the principal *emetics* and give their natural history; also give the general indications for their administration and the special applications of each.

2. Give the officinal preparations of *mercury;* their uses and the doses of each.

3. Give the natural history of *opium*, and the pharmaceutical preparations into which it enters as a principal ingredient,—also their uses and doses.

4. What are *diuretics?* and what are the indications for their employment? Name some of them and give their special applications and uses.

5. Give one or more uses of the following medicines, and the average dose for an adult; namely: *Bichloride of mercury, Fowler's solution, tincture of aconite, tincture of veratrum viride, sulphate of strychnia, ipecac (pulverized), and sulphate of zinc, as emetics; castor oil, bromide potassa and sulphate of magnesia.*

CHEMISTRY—*TOPICS.*

1. Name the principal sources of heat and give examples illustrating each; also describe the modes of its communication and illustrate by examples. How does it effect solids, liquids and gases? Give the law that governs each. What instruments are used for measuring heat, and what are the advantages of each?

2. Name the *metals* which, by oxidation, produce alkalies. Give the most useful in the arts and medicine: also their history, distribution, preparation and properties. Name six of the salts of potassium, with their chemical formulæ.

3. Give the properties and chemical composition of alcohol. Give the action of acids upon alcohol and its products. Name the products of the oxidation of alcohol.

4. Give the history, distribution and properties of *sulphur*, and the several products of its oxidation.

5. Give the solid constituents found in normal *human urine*, their chemical detection, and the significance of the excess and deficiency of each.

SURGERY—*TOPICS.*

1. Give the diseases of the thyroid gland; and the indications for surgical operations upon it, with the procedure and dangers of the same. Enumerate some of the most common benign tumors of the neck, and give their pathology and treat-

ment. Give the treatment of abscesses and fistulæ of the neck.

2. Describe some of the principal injuries and diseases of the chest and lungs, requiring surgical interference and treatment of each. Give the diagnosis of hydrothorax and its treatment in detail.

3. Give the symptoms, pathology, prognosis and treatment of psoas abscess, and also, the diagnosis between psoas, splenic and renal abscesses.

4. Give the various fractures of the femur, and the symptoms of each; and also, their different modes of treatment, with the reasons for the same.

5. Give the diagnosis of the following dislocations, namely: Shoulder, hip, knee and ankle: the manner of reducing each, the reasons for the same, and the after-treatment.

OBSTETRICS AND DISEASES OF PUERPERAL WOMEN—*TOPICS*.

1. Amenorrhœa. Define it. Into what two classes may it be divided? Give the causes and treatment under different circumstances. What indications would lead you to suppose a suppressio-mensium of five months duration might be due to pregnancy?

2. The pelvis. Give its bones, joints, axes, planes and diameters. How and from what causes may it be deformed, and how may these deformities effect parturition?

3. What are the symptoms and causes of threatened abortion? How would you treat it in its different stages? What may be its immediate and remote effects upon the woman?

4. Mechanism of labor. Define and describe principle presentations and positions, and what ones may affect unfavorably the process of labor.

5. Prolapse of funis. Causes. Dangers from it. How to be managed. How would you manage a breach presentation, and how a shoulder presentation?

6. Puerperal Eclampsia. Define it. Some of its causes. Treatment.

PRACTICE OF MEDICINE.—*TOPICS*.

1. Give the normal pulse, temperature and respirations, ratio of respirations to pulse beat; how great variations in healthy individuals; what variations of temperature from healthy standard indicate danger? What pathological conditions vary pulse and respirations?

2. Name some disease of nervous system. Give symptoms, cause and treatment.

3. Pneumonia, signs and symptoms of different stages, pathology, treatment.

4. Describe measles and scarlet fever, differential diagnosis, complications and sequelæ of each; treatment.

5. Describe dropsy, its variations and causes; treatment.

6. Typhoid fever, its symptoms, pathology, complications and treatment.

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ORIGINAL ARTICLES.

SIMPLE THERAPEUTIC MEASURES.*

BY J. H. KELLOGG, M. D., BATTLE CREEK, MICHIGAN.

I have chosen for my subject "Simple Therapeutic Measures," in the hope that I might be able to present a few fragments of knowledge which might have escaped notice by the several essayists who have recently favored your association.

By *simple* measures I mean those of a non-medicinal character; and perhaps, I should preface my paper by the remark that I do not offer this subject because I believe in this class of remedies alone, but because I believe them to be of very great importance and really of greater value, on the whole, than those of a more complex character; at least, their value is far greater than is generally supposed.

We have termed simple therapeutic means, those which include the various applications of *water*, *air*, *light*, *heat*, *electricity*, *exercise*, *food and mental influences*. These agencies are sometimes termed *hygienic*, because they are not only useful in disease in aiding in the restoration of health, but are also essential to the maintenance of life and health at all times. Of all remedies which may be employed in the treatment of disease we consider these the most important:

(1) Because a great share of the maladies to which human beings are subject, arise from disturbances in the relations of

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*A paper read before the Ann Arbor Medical and Surgical Society, February 28, 1881.

these agents to the human system, which only need to be regulated to effect a cure of the disease.

(2) Because they sustain to the vital organs friendly, rather than hostile relations, and harmonize with its processes in a most admirable manner.

(3) In consequence of these facts, the remedies comprised in this class, are those which are least expensive to the system, since they will accomplish the results desired with the least expenditure of vitality.

Recognizing this fact, the attempt has been made in the last quarter of a century, to found an exclusive system of medicine, known as the hygienic or hygieo-therapeutic system. The attempt has been a futile one, however, the inadequacy of the system being thoroughly exposed by the death of the would-be-founder, from malarial fever.

The value of most remedies is usually estimated by the number of "properties" which they possess, and the efficiency and certainty with which their various effects may be obtained. Considered in this light, water may be considered as one of the most useful of the known remedies; indeed, when the great diversity of its uses, and the prompt and efficient character of its effects, together with the kindly manner in which it is received by the system are considered, it is not to be wondered at that it has found not a few enthusiastic advocates, who have believed it to be a universal remedy, a panacea for all human ills. Those who are best acquainted with its properties and its potency when properly applied, are the most enthusiastic in its praise. The eminent Dr. Fothergill, of England, well known in this country through his admirable papers in American medical journals, would seem to be almost as warm an advocate of its use, as the most ardent disciple of Priessnitz. In his "Hand-book of Treatment" he says: "Personally, I believe, that hydropathy, rescued from quackery, and under proper professional guidance and superintendence, will form one of the most universal remedies of the future." The same author again remarks, in the work referred to, "Indeed in hydropathy we see empirically achieved what a scientific phisiology, would ere long have indicated as the logical and rational plan of treatment of numerous affections of mature and advanced life, which take their origin in the imperfect elimination of waste, either the products of tissue change, histolysis or the results of protein compounds, imperfectly assimilated or furnished to the system in excess of its needs."

Percy, an eminent foreign physician, surgeon-in-chief of the armies of the Moselle and Rhine, declared that he would abandon the practice of medicine if water were denied him as a remedial agent, saying, "Water furnishes immense resources as a curative agent."

The remedial or therapeutic properties of water at various temperatures, and applied in various forms, may be stated to be the following: *Refrigerant or antiphlogistic, tonic, sedative, antispasmodic, anodyne, anesthetic, styptic, dissolvent, eliminative, laxative, emetic, derivative and alterative.*

Others might be added, but these are sufficient to represent its several uses. When applied at a temperature less than that of the body, water lessens the production of heat, and also abstracts it by conduction. For this purpose it is unrivaled in the whole range of remedial agencies. No other will so readily, so easily, so certainly, bring down the temperature of a fever, diminish the pulse, and ameliorate all the symptoms depending upon exaggeration of vital activity as this.

Water may be used in such a way as to increase the rapidity of the circulation and the temperature very quickly and powerfully. The hot bath is a most efficient stimulant in the true sense of the word. It will so excite the circulation as to increase the pulse from seventy to one hundred and fifty, in fifteen minutes. The tonic effects of a short, cool bath are well appreciated by all who have ever enjoyed it.

Remedies which depress vital action are termed sedatives. Cold water is one of the most efficient sedatives. It will lower the temperature, rapidly diminish the pulse and restrain excessive vital action to almost any degree desired, and without any of the unpleasant after-effects, and few of the immediate dangers which accompany the use of such remedies as prussic acid, tobacco and blood-letting. The cool or tepid bath, will often reduce the pulse twenty or forty beats per minute in a short time, and diminish the temperature accordingly.

No remedy is more certainly successful in hysterical convulsions than water. In infantile convulsions its success is almost unrivaled. In cramp, tetanus and various forms of spasmodic affections, and even in puerperal convulsions its utility has been well demonstrated.

The effects of local applications of both warm and cold water in relieving pain, are well known. In many other modes of application it is also effective in a very high degree in relieving pain and nervous irritability.

The anæsthetic effects of water at a very lower temperature in the form of ice, are too well known to need more than mention.

The efficiency of cold water as a ready means of arresting hemorrhage has long been recognized in surgery; within a few years, however, it has been discovered that hot water, when properly applied, has a still more powerful effect especially in cases of capillary oozing or bleeding from small vessels. We have, on several occasions, checked, almost instantly, a bleeding which resisted all other means which could be applied.

The power of water to secure the absorption or dispersion of some forms of morbid growths, particularly glandular enlargements, is now well recognized. By cold, or alternate hot and cold applications, chronic swellings of the joints and other parts, serous accumulations, enlargement of lymphatic glands, of the thyroid gland, and even of the spleen and liver, may be successfully treated.

As water is a perfect solvent for the various excrementitious substances, produced in the body through tissue waste, as well as of all the foreign elements which find entrance into the blood, it is of all substances, the most efficient and powerful eliminative. It has been proven to be thus eminently useful as a *diaphoretic* in increasing the action of the skin; as a *diuretic* in facilitating excretion by the kidneys; and as a most excellent *cholagogue* in increasing the activity of the liver and occasioning a consequent increase in the production of bile. It is also, when properly applied, an excellent *expectorant*, and undoubtedly also increases the action of all the excretory organs of the body.

Used in various ways, water is very effectual in producing movement of the bowels, but never occasions those violent and unpleasant symptoms which accompany and succeed the use of purgatives.

As an emetic, in the great majority of cases no other is needed. Nearly all emetics require water to render them efficient.

For a long time mercury has been considered the champion alterative of the materia medica. It must yield the place to water, however; for water not only accelerates waste, but increases construction in even greater proportion, according to the experiments of Professor Liebig, and other eminent observers. This effect of water results from both its internal and its external use. One of the most important properties of water applications is their powerful derivative effect. Few other applications, internal or external, can equal them in efficiency and certainty of action.

The utility of water as an agent in the treatment of disease, is not a modern discovery, as the pretentions of some aspirants for notoriety have led many to believe. A very cursory glance at the history of various ancient nations, furnishes sufficient evidence that the use of the bath, as a curative agent, was of very remote origin. The works of the oldest medical authors contain numerous references to the bath, recommendations of its use in cases of disease and testimonials of its good effects when properly employed.

The learned Greek, Hippocrates, the father of medical literature, and a very acute observer of disease and the effects of various agents upon the body, highly recommended the use of water in many diseases, describing with great care the proper mode of administering a simple bath. He laid great stress upon the careful and skillful use of the bath, asserting that when improperly applied it, "instead of doing good may rather prove injurious." His directions for the employment of the bath were very discreet. He very wisely remarks that those patients whose symptoms are such that they would be benefitted by bathing, should be bathed even though some of the requisite conveniences may be wanting; while those whose symptoms do not indicate the need of this remedy, should not employ it, though all the necessary appliances are at hand. He made great use of water as a beverage in treating disease.

Celsus and Galen, two noted Latin physicians, extolled the bath as an invaluable remedy almost two thousand years ago. The latter pronounced the bath to be one of the essential features of a perfect cure, which he termed *apotheraphia*, exercise and friction being the other essentials. If the regular physicians of half a century ago, had followed the practice of Galen as described in his works, they would have refreshed their languishing fever patients with cold water as a beverage, instead of leaving them to be consumed by the pent up fires which parched their lips, disorganized their blood and finally ended their sufferings with their lives. Celsus was proud to boast of employing the bath more frequently and systematically than others had done before his time.

The North American Indians employ the bath for many diseases. They have original and peculiar ways of administering both water and vapor baths. The most common bath among them is the vapor, followed by a plunge into a neighboring stream. They generate the steam by pouring water upon hot stones, while they are enclosed in a small, close hut made of mud or skins.

The native Mexicans secure a hot-air bath by confining themselves in a brick sweat-house, which is heated by a furnace outside. These savages seem to have the most implicit confidence in the efficacy of the bath, always employing it when ill, and with excellent success. The Africans also are not unacquainted with the medical uses of the bath. It is stated that on the outbreak of small-pox on a slave-ship many years ago, the negroes begged so piteously when treated in the usual manner, by smothering beneath many thicknesses of blankets and mattresses, to be allowed to follow their own method, that they were at last permitted to do so, when they at once tied ropes about the bodies of the patients and let them down into the sea. This was done several times a day and all thus treated recovered.

In the latter part of the last century, Drs. Jackson and Currie, each published reports of cases of fever in which they had found the use of the bath a remedy of remarkable efficacy. Dr. Currie obtained many followers for a time, but no very deep impression was made upon the public mind, though his cases were authentic and very ably reported.

About the end of the first quarter of the present century, a native of Graefenberg, a small town in Austrian Silesia, by the name of Priessnitz, met with an accident by which three of his ribs were broken. He treated himself by the application of cold water; and then tried the same remedy upon others in similar cases. His success encouraged him to make further experiments, and though an ignorant peasant, his natural acuteness enabled him to devise various means for applying water to the body, and to suit the application to various diseases. His increasing success attracted numerous patients, and his fame became in a few years world-wide. Many of his methods were very rude and his ignorance of medical science led him into many errors; but he succeeded in restoring to health hundreds of patients, whose maladies had been pronounced incurable.

The interest in the new method became so great that numerous other individuals equally ignorant, and possessing less shrewdness, undertook to imitate the German innovator. Some of them were successful, many were not; all were alike in committing numerous blunders through ignorance of scientific medicine. But public attention was called to the utility of water as a remedial agent so forcibly, that a powerful impression was produced in its favor. From that time until the present, the use of water has been largely in the hands of unscientific empirics who have advocated it as a specific, and employed it to the exclusion of other remedies in a large measure. This course, together with many other gross errors connected with the practice, has deterred scientific physicians from employing it sufficiently to test its merits, only in a few exceptional cases.

The friends of Priessnitz claimed for him a great discovery, but as we have seen, he discovered nothing which was not known a century before, if not indeed some thousands of years previous. It was doing Priessnitz no injustice to say that he did little or nothing toward establishing principles, but followed chiefly a routine method of practice.

At the present day, the utility of water is a well recognized fact, and it is now often prescribed in the standard text-books as an excellent remedy for many diseased conditions. Yet, that there is still a want of appreciation of the remedy is fully attested by the infrequency of its use by the regular profession. This neglect may be due, in part, to a prejudice which the members of the regular profession have acquired, on account of the quackery which has too often been connected with the use of this remedy. Nevertheless, there is no good reason why an efficient remedial agent should be suffered to receive the stigma which attaches properly, only to those who are responsible for its abuse. Within the last few years there has been a growing interest in hydrotherapy, especially among the leading physicians of France and Germany. In this country also, an interest has been awakened in the subject, although among the non-progressive part of the medical profession, there still remains much of the "old time" prejudice, which has for years prevented this powerful remedial agent from taking its proper place in the front rank of therapeutic agents. From conversations with many physicians we are convinced, however, that the hesitancy in the use of water at the present time arises far more from a lack of accurate information respecting the details of its therapeutic application, than from any settled prejudice.

Among those who have investigated in a scientific manner the value of water as a therapeutic agent in modern times, may be mentioned the well known names of Brand, Hagenbach, Ziemssen, Winternitz, Immerman, Mosler, Wilson, Fox, Bartels, Liebermeister, Ludwig, Schroeder, Fiedler, Hartenstein, Weber, Greenhow, Thompson, Niemeyer and Ringer, among foreign physician of eminence; and a still larger list of physicians of the highest standing in this country might be added.

A few years ago, we were present at a meeting of the New York Academy of Medicine, where we had the pleasure of listening to an able paper by Professor Austin Flint, president of the academy, entitled "The Researches of Currie, and Recent Views concerning the use of Cold Water." Professor Flint did not confine his attention to *cold* water, but considered the subject of hydriatics in general.

In referring to his own experience in the use of water, Dr. Flint remarked. "The relation of my own experience will of necessity be stated in a few words, as my employment of the remedy has heretofore been much more limited, than it will be in the future if my life is spared." He then related some very interesting cases in which he had employed water as the chief remedy, with most excellent success. He also took occasion to recommend, as one of the best means of applying water in fevers, the wet sheet pack, as employed in the various hydropathic institutions of the country. He had used the continued cold pack in a number of the worst cases of sun-stroke in Bellevue Hospital with marked success. This remedy is still employed there in this class of cases.

Dr. F. also related a remarkable case of acute inflammation of the kidneys, in which the patient exhibited the characteristic symptoms of poisoning from the retention of urea. After other remedies were tried in vain, the patient's life was saved by the simple administration of water as a beverage, at short intervals. The diuretic effects of water soon washed away the poison and gave immediate relief.

Another case mentioned by Dr. Flint, was one of remittent fever which he had treated with water, administering thirty-five cold packs in the course of a week. The patient died, but the doctor thought, that if he had been more thorough in his treatment, giving more packs and longer ones, he would have lived.

We might dwell at length upon the special applications of the various means of employing water, but have not space for such consideration here. Rightly used, water is a potent agent for good, but it is capable of doing harm. When most skillfully used it is not a cure-all, and sensible people have been rightly disgusted with the claims which have been made by certain pretentious persons for its use. One declares that the bath will dissolve out of the body mineral substances which have been taken into it. Another claims, to have been able by the application of fomentations to a rheumatic knee, to extract in regular order the various ointments which had been successively applied. Numerous other claims, equally preposterous might be related, if it were necessary. They have all tended to excite a feeling of contempt for a means of treating disease, which is really worthy of the highest estimation, and which is now rapidly gaining general recognition, in spite of obstacles placed in its way by fanatical advocates.

Heat is a powerful vital stimulant. Any one who has ever watched through a microscope the evolutions of an amœba, and noticed the sudden quickening of its activity under the influence of an increase of temperature, can readily understand that the application of heat may be made a powerful means of quickening the protoplasmic activities of various vital organs. We have often observed the disappearance of uric acid crystals from the urine, after the thorough application of fomentations over the liver, and are thoroughly convinced that this is an excellent means of quickening the functions of this organ. A fomentation over the stomach is a most excellent means of relieving slow digestion, and when applied to the bowels, stimulates their activity. Applied over the heart, either moist or dry heat, stimulates the action of that organ in a very marked degree, while cold has the opposite effect. The universal application of heat, as the Turkish bath, is a powerful stimulant of all the vital functions, thus making this bath an alterative as well as a most excellent eliminative means.

By means of freezing, parts may be rendered wholly insensible to pain, so that slight surgical operations may be easily performed. When the freezing is long continued, the frozen parts may lose their vitality entirely, which will caused them to slough away. By this means, excrescences, as warts, wens and polypi, fibrous and sebaceous tumors, and even malignant tumors, as cancer, may be successfully removed. Small cancers may sometimes be cured by repeated and long continued freezing. Their growth may certainly be impeded by this means. A convenient mode of application in cancer of the breast is to suspend from the neck a rubber bag filled with pounded ice, allowing it to lie against the cancerous organ.

Freezing may be accomplished by applying a spray of ether, by means of an atomizer, or by a freezing mixture, composed of equal parts of powdered ice and salt, or two parts of snow to one of salt. Mix quickly, put into a gauze bag and apply to the part to be frozen. In three to six minutes, the skin will become white and glistening when the bag should be removed. Freezing should not be continued longer than six minutes at a time as the tissues may be harmed, though, usually, no harm results from repeated freezing if proper care is used in thawing the frozen part. It should be kept immersed in cool water, or covered with cloths kept cool by frequent wetting with cold water, until the natural feeling is restored.

Felons may often be cured, especially when they first begin, by freezing two or three times. Lumbago and sciatica, as well as other forms of neuralgia, are sometimes almost instantly relieved by freezing of the skin immediately above the painful part. We have cured some obstinate cases of sciatica by this mean after other remedies had failed.

The value of sunlight in the maintenance and restoration of health, although well recognized, is seldom made of practical utility in the treatment of disease. The important relation of sunlight to health is shown in the effect produced upon plants as well as animals by depriving them of its influence. In caves, mines and other places excluded from the light, plants do not grow, or at most they attain only a sickly development. The same is true of animals. In the deep valleys among the Alps of Switzerland, the sun shines only a few hours each day. In consequence, the inhabitants suffer terribly from scrofula and other diseases indicative of poor nutrition. The women, almost without exception, are deformed by huge goitres which hang pendant from their necks, unless suspended by a sling. A considerable portion of the males are idiots. Higher up, on the sides of the mountains, the inhabitants are remarkably hardy, and are well developed, physically and mentally. The only difference in their life is the greater amount of sunshine higher up the mountain side. When the poor unfortunates below are carried up the mountain they rapidly improve.

The value of sunlight for the sick, has been amply demonstrated by hospital experience, which shows a much larger per centage of recoveries in rooms exposed to the sun than in those excluded from its rays. That the sun has a powerful influence upon the skin is shown by the greater increase of pigment, referred to ordinarily as "tan," which is produced by a free exposure to the sun and air. This results from an increased activity of the cutaneous tissue.

The sun-bath, or insolation, consists of exposing either the whole or a part of the body, to the direct rays of the sun, or protected by a slight covering of thin white muslin. In taking the bath the head should be protected from the rays of the sun, as the effects upon the head are ordinarily so powerful as to excite unpleasant sensations. In warm weather the bath may be taken in an enclosed space, the top of which is open, admitting the sun in such a manner as to allow it to fall upon a person lying upon a bed or couch within it. Such an arrangement may be easily made of sheets of muslin in the backyard or upon the top of a flat-roofed house. Ordinarily, however, it is best to have a room constructed in the attic for the purpose, a window being placed in a roof having a south slope, in such a way as to make the sunlight admitted available for three or four hours during the middle of the day. Means should be provided for ventilation, as otherwise the heat within such a room may become too great for comfort, and so excessive as to interfere with the efficiency of the treatment. All the benefits to be derived from the use of sunlight can be obtained from ordinary glass. During the "blue glass mania" a few years ago, we made a number of experiments with blue glass, by which we were convinced that the only difference in the effects of different colored glass, aside from the mental effect upon sensitive patients, is in the modification of the intensity of the rays of light, produced by the different kinds of glass.

The length of time the patient should remain in the bath depends on the condition of the patient, and the effect desired. Highly sensitive patients, especially when beginning to use the bath, should remain exposed to the sun but a short time, ten or twenty minutes usually being long enough. Less sensitive patients, and those accustomed to sun-light, may remain in the bath for from half an hour to an hour. The bath should be concluded by a tepid sponge bath, or wet hand rub, as the activity of the skin is greatly increased by exposure to the sun, the patient often perspiring very freely.

The effect of the bath is usually to produce a feeling of languor and lassitude. Many patients fall asleep while in it. Unpleasant effects are rarely produced. In cases where they occur, the usual cause is too long continuance in the bath, or too great intensity of the sun's rays. To guard against unpleasant effects from the latter cause, it is well to cover the patient at the first of the bath with a sheet, or to draw over the sash through which the light is admitted, a screen of very thin material, as gauze or mosquito netting. It should be recollected that the solar rays sometimes produce very powerful effects as seen in sun-stroke, and hence patients should receive careful attention while in the bath; especially if they are known to be very sensitive, or easily affected by the sun. Cold water should also be kept at hand in case headache is produced, and also for ready use to guard against sunstroke. By the use of different colored screens, the intensity of the sun's rays may be modified at pleasure. The sunbath is an excellent means of treatment in all cases of defective nutrition, in convalescence from various acute diseases, in nervous affections and skin diseases, and especially in consumption and dyspepsia. For the last two diseases we have used it very extensively, and with excellent success. Consumptives, under the stimulating influence of the sun's rays, gain flesh, improve in appetite, are relieved of their exhausting night-sweats, gain color, and, in fact, improve in every respect. The dry, inactive, almost lifeless skin of the dyspeptic, becomes moist and supple, and shows marked increase of activity. Rheumatic patients also are benefitted by this bath. In fact, nearly all classes of invalids may employ it with advantage. It has been found also that wounds heal much more rapidly when exposed to the sun's rays two or three times a day, than when kept continually covered.

A solar ray consists of heat rays as well as rays of light. It also contains actinic or chemical rays, and its therapeutic effects are doubtless due to the combined influence of these three potent forces. That by means of a lens, all of these rays may be concentrated, and their potency thereby increased, is illustrated by the well known properties of the burning glass. The rays of the sun concentrated by means of a lens, have been used in the treatment of obstinate ulcers, discolorations of the skin and various morbid growths. Undoubtedly, the remedial power of the sun's rays used in this way, would be, upon thorough study and utilization, found to be of very great value in a large number of cases.

There are numerous evidences that the sun-bath was not only known among the ancients, but was used by them to a considerable extent. Plutarch tells us that Diogenes, the renowned Athenian cynic, was in his old age accustomed to lie in the sunshine for the purpose of recruiting his energies, a custom, which according to Pliny was common to the old men of Greece.

It is stated that Diogenes valued his sun-bath so highly, that when Alexander called upon him and offered to render him any service in his power, he replied in answer to the kind offer, "Only stand a little out of my sunshine." According to Pliny, the custom of the sun-bath was common among the Romans. Indeed, both the older and younger Pliny, were accustomed to spend an hour in exposure to the sun daily, after dinner. Hippocrates prescribed the sun-bath for chills. Numerous other evidences might be cited of the ancient use of the sun-bath, but these will perhaps be sufficient. A French physician once said to some person, who had brought his children to him for treatment: "Take these children to the country; feed them as well as you can, but above all roast them—roast them in the sun."

That the atmosphere itself is a powerful medium of affecting the system beneficially or otherwise, is evidenced by a large number of facts, well known to everyone as the influence of climate, altitude, and other familiar means of securing what is termed a "change of air." It is not, however, to these applications of air that we wish now to refer, but rather to more specific uses of the element and methods that may be made use of in all latitudes alike. Aërotherapy is still in its infancy, but enough facts have been determined and tested by experience, to warrant the conclusion that the air is a potent therapeutic agent, for use in certain classes of cases at least.

The air has a very soothing effect upon the body when allowed to come in contact with its entire surface. It answers a very valuable purpose when a water-bath is impossible or when the patient is too feeble to endure the application of water. A sleepless person will often fall into a sound and refreshing slumber after walking a few minutes in his room with his whole body exposed to the air. The effects of night labor upon literary people may be partially counteracted by the air-bath. Benjamin Franklin was accustomed to pursue his writings to a late hour after divesting himself of his clothing, and he recommends the practice to others compelled to labor late with the pen. What is known as the pneumatic treatment, which consists in the use of compressed and rarefied air, has become quite popular in France and Germany within a few years. This treatment has been little employed, however, in this country, its use having been confined almost wholly to irregular practitioners and quacks, who have employed it in the form which is known as the vacuum treatment. This treatment consists of either exposing a whole or a part of the body to air which has been either compressed or rarefied.

In the application of compressed air to the whole of the body, the patient is placed in a small room constructed for the purpose, into which air is admitted until a pressure of one and a half to two atmospheres is obtained, the air being withdrawn as rapidly as needed, to remove the products of respiration. The patient sits or lies in this room from one or two hours, to several hours, according to the effect desired.

In the treatment described, the patient may be subjected to the influence of rarefied as well as compressed air; but the use of rarefied air, is usually confined to the exterior of the body. For this purpose, it is applied by means of suitable receptacles for the arms and legs, from which the air can be partially exhausted. The first impressions produced by the application of rarefied air especially, when made in the manner last described, are decidedly unpleasant. The same is true to some extent of local applications. Dr. Waldenberg, professor in the University of Berlin, has devised a portable apparatus by means of which compressed air may be inhaled. These various devices are chiefly employed in the treatment of diseases of the chest, although the so-called vacuum treatment has a wider range of application and is said to be useful in the treatment of paralysis, defective development of the limbs and also as a derivative, relieving the brain and nerve centers of congestion. We have employed vacuum treatment to some extent, and believe it ty be a useful agent. From experiments which we have recentlo made with Waldenberg's apparatus, we think it capable of producing most excellent results, especially in chronic bronchitis, asthma, incipient consumption and other chronic lung affections. It may be used in such a manner as to increase exhalation as well as inhalation, and thus produce a greatly increased development of the chest. The same apparatus used for compressed air may be employed in the inhalation of superoxygenated air, or air which contains more than the usual proportion of oxygen. Various medical vapors are also employed by this means. The remedial value of pneumatic treatment is less thoroughly established than almost any other of the remedial agents, on account of the small amount of attention which this agent has received from scientific investigators. We believe, however, that it is capable of producing excellent results. In a case of chronic emphysema in which we employed the apparatus, causing the patient to breath into rarefied air, one-fiftieth of the ordinary pressure being removed, the patient was able to exhale one hundred and sixty cubic inches of air, after an ordinary respiration, though he could ordinarily exhale but forty. A consumptive patient, a young lady with remarkably narrow chest, who could inhale but thirty cubic inches of air by a few weeks treatment, became able to inhale one hundred and twenty inches.

Probably, next to water, no single remedy fulfills so many requirements in the treatment of disease, as different forms of electricity. It is one of the most powerful agents in nature, for evil as well as for good, it is true, but nevertheless, it is capable of being controlled so perfectly as to be made useful in the treatment of a large number and great diversity of conditions.

We need not dwell on the therapeutic application of this agent, however, as it is now so well recognized as a useful, and for certain cases an almost indispensable agent, that it is receiving a fair share of attention. We believe, however, that it is well deserving of more frequent use. For several years we have used this agent in its two most useful forms, in an average of twenty to thiry cases daily, and the results which we have obtained from its use, have been for the most part eminently satisfactory. As a means of relieving transient pain it has no rival, except perhaps hot fomentations, among nonmedicinal agents. In the form of central galvanization we have obtained most excellent effects in cases of obstinate insomnia, cerebral hyperæmia and epilepsy.

The value of exercises of various sorts as a remedial measure has for ages been recognized by both barbarous and civilized nations. The Chinese, one of the oldest nations on the globe, together with the inhabitants of India, have long appreciated the value of exercise. According to accounts which have been gathered from their writings, they have for the last two thousand years or more, possessed a knowledge of the remedial value of exercise, and have employed it frequently in a more or less systematic manner.

The ancient Greeks and Romans also employed exercises of various sorts, not only for developing the body, but for relieving many diseased conditions. We might find it interesting to note more particularly some of the peculiar modes of treatment employed by the various nations mentioned in ancient and modern times; but as our space is limited, we will confine our remarks entirely to what are known at the present time as "Swedish Movements." This system of medical gymnastics was chiefly developed by a Swede, by the name of Ling, who was born about the middle of the last century. His system of exercise was put in practice in Stockholm, Sweden, about the year 1813. The results obtained were so remarkable, and attracted such general attention, that Ling very soon secured the coöperation of the Swedish government, which enabled him to found an institution under governmental patronage for the employment of his system, for the treatment of chronic diseases of various sorts, which was so successful that it remains in existence at the present time, though its founder has been dead for more than forty years. At the present time, many hundred patients are annually treated at this institution, and its success has encouraged the establishment of similar institutions in various parts, especially in this country, so that it is probable that at the present time, there are not less than fifty in active operation.

The value of movements in the treatment of disease, has become now so thoroughly established, that it is not necessary for us to adduce other arguments than the results of their use, to show their utility.

For some years after the introduction of this mode of treatment, it was looked upon with suspicion by the better class of physicians generally, and was left to be employed by quacks and charlatans. In many instances it has been employed by unscrupulous persons, who sought to attract patronage by laying claim to the possession of skillful magnetic powers. There have been many cases in which the patients were benefitted by the treatment of these quacks, when in fact, their success was wholly due to the results of the manipulations of various sorts, which were invariably employed by the so-called "magnetic doctors." We will now briefly consider some of the principle remedial effects of the employment of medical gymnastics.

It has long been recognized as an established physiological fact, that the circulation of the blood is greatly influenced by the action of the muscles. By muscular action, the blood is pressed along the veins, and thus its progress toward the heart is greatly accelerated. Whenever there is a deficiency of muscular activity, as in persons who are confined to their beds, or who are unable to take a sufficient amount of daily exercise, the employment of "Swedish movements" will often produce most marvellous results in restoring to a normal condition the unbalanced circulation. They are of special service as a derivative measure when applied to the hands and feet of any person suffering with habitual coldness of these members. We are acquainted with no remedy which will so readily secure marked and permanent results in this direction as this. Applied to the whole skin, it is an excellent means of relieving congestion of the head, spine, liver and other organs.

No function may be so rapidly augmented and permanently increased by the aid of movements, as that of respiration. We have known patients to double their breathing capacity by a few week's practice in the employment of lung gymnastics.

In the great majority of chronic diseases of other organs as well as in functional derangement of the stomach, deficient muscular power and activity of the stomach and intestinal canal is one of the principal morbid conditions, and one to which especial attention must be given in directing a successful mode of treatment. In many cases, movements applied to the abdomen, seem to meet these indications better than any other which can be employed.

We have been in the habit of prescribing this means of treatment in cases of this sort, for a number of years, and are more and more thoroughly satisfied with the results obtained. In not a small proportion of cases of chronic disease, defective assimilation is one of the most serious obstacles which must be overcome in conducting the case toward a successful issue. It is not what a person eats, or even what he digests, that benefits him, but what he assimilates. There is no means by which assimilation may be so powerfully stimulated and encouraged, as by the careful and skillful employment of "Swedish movements." This fact is now so thoroughly recognized by the leading physicians of all countries, that this means of treatment is relied upon as almost the sole remedy in the treatment of a large class of cases. The influence of movements in increasing vital action is shown, not only by the rapidity with which patients gain in flesh under their employment, but by the fact that the immediate effect of the application in the majority of cases, is to produce marked rises of temperature, which cannot be accounted for in any other way, but that there has been a marked increase in vital action as the result of treatment. As the effect clearly suggests, the remedy is of great service in the treatment of cases of general debility, and all other diseases in which there is a general inactivity of the vital functions.

No remedy is of greater value in the treatment of that class of cases, in which there is disordered muscular activity. as in various distortions of the spine, which result from unequal muscular action, in the great majority of cases, of displacement of the womb and various other diseases peculiar to women. In cases of paralysis, no other remedy, unless it be electricity, will accomplish so much as this, and if we were obliged to dispense with the use of one of these two remedies, we should certainly choose this as the one of greatest value.

Medical dietetics is another subject deserving of more attention than it now receives. We have had the pleasure of helping a number of chronic invalids to the recovery of health by simply making a careful diet prescription. Much harm has been done by the popularity achieved by certian "diet cures," for dyspepsia and various other diseases. The patient's conditions should be very carefully studied with reference to his dietary, and an appropriate prescription made. This is quite as important as application of remedies of any sort, especially in cases of chronic diseases.

Lastly, we would mention mental influence, as an agent which we believe to be perfectly legitimate for use in the treatment of disease, and there is no reason why intelligent physicians should not employ it in the treatment of many disorders, at least those of a functional character. Every observing person is aware of the different results, which occur according as the patients mental condition is cheerful or depressed. It is the common experience of all physicians, to see patients decline and die under the influence of maladies, which might, and should have been relieved by the remedial agents employed, but the beneficial effects of which were counteracted by the unhappy mental state of the patient. If the patient's mind can be brought into full harmony with the method of treatment employed, and his faith and confidence secured, his chances for recovery from any malady are increased ten fold.

Many times have we seen patients to whom we could give no encouragement, and whose recovery seemed wholly impossible, gradually improve under simple methods of treatment, and finally recover, as we firmly believe, more through the influence of their own hope and determination to recover, than through any remedial agent applied. On the other hand, we have with equal frequency seen patients whose disorders were not of a serious character, and who had sufficient natural vigor and sufficiently favorable conditions to secure recovery, apparently, at least, but who went done into the grave, as we have every reason to believe, simply because of a lack of force of character, or of strength of will to bring the mind to coöperate with the treatment employed, or to preserve such a mental state as would be conducive to recovery.

Every physician, and in fact, every person who has anything to do with the sick, should realize the importance of imparting courage, good cheer and hope to them, as by that means they may in many cases do more than in any other way to secure their recovery. There are, no doubt, cases in which it is allowable for the physician to bring to bear such means as fear and other powerful mental agents in the treatment. These cases must be rare, and such means when resorted to must be used with the greatest caution, like doses of powerful poison. A mental remedy, however, which may be used with much success in many cases, is the directing of the patients attention to the part under treatment, at the same time inspiring the most perfect confidence that the cure will certainly be effected. It has been shown by numerous experiments, that concentrating the attention upon any part induces changes in its circulation and nervous supply, and that attention can thus be used as a means of curing disease. In using it as a curative measure as before remarked, it is of course essential, that the patient should be thoroughly convinced that the result desired will certainly be secured by the means employed. In a large share of cases, at least, the expected result will be obtained, although the remedy employed may be wholly inert. The remarkable effects often obtained by the use of highly potentized remedies must be attributed to this cause.

In conclusion we would again urge that physicians pay more attention to the employment of simple therapeutic measures; believing that by so doing, we shall the better attain the noble ends for which our profession exists, and succeed in accomplishing a maximum of good, with a minimum of harm.

AN UNIQUE AND COMPLICATED CASE OF CATARACT.

FROM PROFESSOR FROTHINGHAM'S CLINIC.

Reported by E. N. HAWLEY, M. D.

Mrs. A. M., aged fifty, appeared at clinic March 10th, 1880.

History.—Since she was a child, patient has had more or less trouble with her eyes. When about twenty years of age they became very badly inflamed, remaining so nearly one year. Since that attack her eyes have been very much more troublesome. They are very sensitive, and whenever she takes a cold they become inflamed and painful. Ten years ago they became so very badly inflamed that her vision was nearly destroyed. She was advised to come here for treatment at that time, but did not. From that time she has steadily grown worse so that for the last five months she has been almost blind.

Clinical Remarks.—The long and constant suffering of this patient has rendered her general nutrition feeble. No doubt she has suffered untold miseries from a disease which, if taken early, and proper treatment instituted, might have been easily controlled, and all her subseqeunt trouble averted. In the eyes we find the palpebral fissures very narrow and there is complete entropion of both lids of each eye, with blepharospasm. The retrotarsal fold is almost completely obliterated. There are bands of adhesion formed between the conjunctiva of the lids and the conjunctiva bulbi. The corneæ are hazy but are not yet destroyed. Besides all this there is a cataract in each eye. Now here are several indications to be met. The irritation caused by the contact of the cilia and eyeball must be relieved. There is injurious pressure upon the globe from the continual blepharospasm. The condition of the mucous membrane of the lids and the haziness of the corneæ may be materially improved, and when proper the cataracts may be removed. To attempt to remove the cataract while the eyes are in their present condition would only aggravate the already existing disease. We could not possibly hope for a favorable result. Increased inflammation, sloughing of the cornea, and total destruction of the whole eye would inevitably follow. We must begin and gradually work the case up to a favorable point for extraction of the cataracts. Indeed, she is scarcely in a favorable condition for any operation to-day. We will prescribe for her Huxham's Tincture, a drachm or two before each meal, and muriated tincture of iron, twenty drops in some water after meals. We will apply plaster straps as a palliative measure for the entropion and wait a few days before attempting any operative procedure.

Progress of the Case.—March 13: Chloroform was administered and canthoplasty was performed upon the left eye, and entropion operation on upper lid of each eye.

March 18: The entropion of the lids seems relieved and also the spasm, but the wound in the lid of the right eye did not heal so as to unite the two lips. Sutures were again inserted.

March 25: The lips of the wound in the right eye not having united, they were trimmed and sutures again inserted. The eyes are not discharging as much as they did. Canthoplasty was repeated upon the left eye, the previous operation not giving sufficient relief, and the same operation was also performed upon the right eye. The upper lids were touched with the mitigated stick and directions given to apply a solution of nitrate of silver, five grains to the ounce of water, daily as soon as possible, and a collyrium of sulphate of zinc and morphia, each one grain to the ounce.

April 3: Since the last date the solution of nitrate of silver has been applied five times and the collyrium used daily. The lids have ceased to discharge pus and she is able to open both eyes although a little photophobia still exists. There is still a small wound in the upper lid of the right eye, where the edges of the integument failed to unite. The edges were vivified and a suture introduced. General health improved. Tonics continued.

April 7: The lids of the left eye are in such a condition as to warrant an operation to remove the cataract. Symblepharon exists to such a degree that the upward extraction was impossible. Ether was administered and the cataract was removed through a downward incision without accident.

April 10: The wound has healed kindly, there is a little spasm of the lids and slight iritis. She can count fingers.

April 26: At patient's request an exactly similar operation was performed on the right eye.

April 29: The right eye was opened. It does not seem to get along as well as the left did. There is more iritis and pain.

May 11: Both eyes have recovered from the operations with good results. She was fitted with glasses. Number four and one-half before each eye brought her vision for distance up to one-twentieth of normal vision. The cilia are nearly all turned away from the eyeballs. There is some photophobia still but it is rapidly disappearing. At present she cannot keep her eyes open except in a dim light. The imperfection of vision is probably due to haziness of the cornea.

May 12: Patient left the hospital to go to her home.

May 9, 1881: She is now able to do house-work and almost all kinds of other work, and can read coarse print.

SPECIFIC FOR PAROTITIS.

BY F. J. GRONER, M. D., BIG RAPIDS, MICHIGAN,
Physician to Mercy Hospital.

Last March I became painfully aware that I was to have the mumps. I was over-crowded with work and had no time for nursing mumps. I thought of the sialagogue properties of pilocarpin, and of the power of quinine to arrest inflammation, so I took at bed time thirty grains of a saccharated extract of jaborandi which equaled three-twentieth grains pilocarpin and five grains extract of jaborandi, and fifteen grains of quinine. In half an hour salivation was excessively profuse and continued for several hours. I awoke in the morning and found the pain absent and the swelling much less. The weather was very cold and I was obliged to ride fifty miles to make a visit. I found the pain returning in the evening, so I took a smaller dose when all the symptoms disappeared. I concluded the treatment worth trying on others. So I ordered a similar dose for the first well-marked case of mumps that would appear at Mercy Hospital, and that a second should be treated without the quinine. But a few days elapsed when the opportunity was afforded and in both cases the most happy results were attained. I then tried the jaborandi on two more cases with similar results. The sixth case was treated with fluid extract of jaborandi with orders to stop the medicine as soon as ptyalism was produced. The pain was diminished but a cure was not effected, which I attributed to smallness of dose. These cases are not sufficient to establish the fact that pilocarpin is a specific. But as the remedy is coming into such general use the results will commend themselves to others.

CASES OF HARD CATARACT OPERATED ON BY MODIFICATION OF GRAEFE'S METHOD BY PROFESSOR GEORGE E. FROTHINGHAM, FROM JANUARY 1, 1880, TO JANUARY 1, 1881.

TABULATED BY JOHN G. KENNAN, M. D., CLINICAL ASSISTANT.

Cases marked * were private patients not operated upon in the Hospital.

No. of Case.	Date of Entering the Hospital.	Name and Residence of Patient.	Age of Patient.	Eye Operated on.	Anæsthetic used.	Progress of Case.	Date of Leaving Hospital.	Result.	Remarks.
	1880.						1880.		
1	Jan. 17.	Mrs. McK., Whelan, Michigan.	51	Right.	Ether and Chloroform	Some soft lens matter left in the eye, which slowly absorbed.	Feb. 4.	Good.	Is to return for needle operation. Returned. After recovering from the double needle operation. V. ¼.
2	Jan. 21.	C. B., Mongo, Indiana.	66	Right.	Chloroform	There was no complication during the operation, but on the second day suppuration of the cornea arose.	Jan. 30.	Failure.	Patient contrary to explicit orders, smoked on morning after the operation, and behaved badly otherwise.
3	Feb. 4.	H. L., Coshoctah, Mich.	23	Right.	Chloroform	No complication.	Feb. 20.	Good.	V. 20-40. This cataract was half soft.
4	Feb. 7.	W. M. C., South Lyons, Oakland Co., Mich.	78	Right.	Ether and Chloroform	Had a low grade of iritis.	Feb. 28.	Good.	V. 1-10.
5	Feb. 11.	Mrs. S. S., Marcellus, Michigan.	74	Left.	Ether.	On the third day there was discovered at the outer end of the incision, a small spot of supuration, but it disappeared in a few days.	Mar. 2.	Good.	V. ⅕. There is still some inflammatory exudate, but this is rapidly absorbing.
6	Mar. 17.	Mrs. L. L., Bay City, Michigan.	60	Right.	Chloroform	No complication.	April 3.	Good.	V. 20-30.
7	Mar. 20.	T. W. B., Palmyra, Michigan.	52	Left.	Chloroform	No complication.	Apr'l 10.	Good.	V. 20-30.
8	Mar. 31.	N. T., Woodbridge, Michigan.	65	Right.	Chloroform	Slight iritis. A thin membrane formed which was broken	Apr'l 19	Good.	V. 20-50.

						through with a single needle.			
9	April 7.	W. J. B. Grass Lake, Michigan.	72	Left.	Ether and Chloroform	No complication.	Apr'l21.	Good.	V. 20-40.
10	April 7.	J. L., Lowell, Mich.	79	Left.	Ether and Chloroform	Severe iritis arose on the 17th of April and lasted until about May 6th.	May 11.	Good.	V. 20-30. The other eye had been lost as the result of an operation at Grand Rapids in 1879.
11	May 8.	Mrs. S. A., Day P. O. Cass Co., Michigan.	66	Right.	Ether and Chloroform	Slight iritis.	May 24.	Good.	V. 20-70 and rapidly improving.
12	May 12.	G. G., Hillsdale, Mich.	65	Right.	Ether.	Had iritis.	June 2.	Good.	V. 20-60.
13	May 15.	Mrs. M. L., Jackson, Michigan.	60	Right.	Ether.	No complication.	June 2.	Good.	V. 20-40. Patient thinks her vision has always been poor.
14	May 22.	Mrs. M. B., Jackson, Michigan.	68	Right.	Ether.	Slight iritis.	June 17.	Good.	V. 20-30.
15	May 22.	C. B., Adrian, Mich.	64	Left.	Ether.	Had slight iritis.	July 6.	Improved.	V. 2-70. This patient had a cataract extracted from right eye seven years ago in New York. Cyclitis followed. There was great pain for a long while after operation and left eye suffered much at the time. After recovery from the extraction of the last cataract, the vitreous was found to be filled with floating opacities, although there had been but little iritis, and the probability is that the eye suffered from sympathy with the inflammation in the right eye after first operation, and was left inflamed. V. 20-30. Reads No. 1, at ten inches.
16	May 22.	Mrs. J. F., Durfield, Michigan.	54	Right.	Ether and Chloroform	A few days after operation patient removed her bandage, and while it was off, the wound broke open. A cystic scar formed. This healed after being twice pricked.	June 26.	Good.	
17	June 3.	G. R., Lodi, Michigan.	60	Right.	Ether and Chloroform	No complication.	———	Good.	V. ½.
18	June 5.	C. W. A., Berlin, Ionia Co., Michigan.	70	Left.	None.	Patient was very restless and uncontrolable. He would, although watched by his son, remove the bandage and use his eye whenever he took a notion to do so.	June 20.	Good.	V. 10-100. Ophthalmoscopic examination showed cloudiness of the vitreous.

CASES OF HARD CATARACT OPERATED ON BY PROFESSOR FROTHINGHAM—(CONTINUED).

No. of Case.	Date of Entering the Hospital.	Name and Residence of Patient.	Age of Patient.	Eye Operated on.	Anæsthetic used.	Progress of Case.	Date of Leaving Hospital.	Result.	Remarks.
19	Jun. 23.	E. E., Elva, Michigan.	75	Right.	Ether.	Had slight iritis leaving a membrane.	July 10.	Good.	V. ⅓. Is to return for a secondary operation.
20	Jun. 25.	D. M., Mount Pleasant, Michigan.	57	Left.	Ether.	No complication.	July 6.	Good.	V. 20-70.
*21	Sep. 20.	Mrs. E. B., Owosso, Michigan.	68	Right.	Ether.	Slight iritis.	Oct. 15.	Good.	V. 20-50.
*22	Oct. 18.	Mrs. C. H., Brighton. Michigan.	66	Right.	Ether.	No complication.	Nov. 6.	Good.	V. ⅓. April 29, 1881, V. ⅔.
23	Oct. 19.	G. R., Fremont, Ohio.	74	Left.	Ether and Chloroform	Iritis followed. Membrane formed which was broken up by a a double needle operation. This too gave rise to iritis causing the opening to close. A second needle operation left small pupil.	Dec. 10.	Good.	V. 1-5.
*24	Oct. 19	Mrs. L. C., Jackson Co., Michigan.	65	Right.	Ether.	No complication.	Nov. 11.	Good.	V. ⅓.
25	Oct. 27.	Mrs. D. B., Brighton, Michigan.	69	Right.	Ether.	No complication.	Nov. 19.	Good.	V. ⅓.
26	Oct. 27.	Mrs. K. S., Ann Arbor, Michigan.	72	Left.	Ether and Chloroform	Slight iritis.	Nov. 30.	Good.	V. 1-6.
27	Oct. 30.	R. R., Clinton Mich.	57	Right.	Ether.	No complication.	Nov. 20.	Good.	V. 20-40.
*28	Nov. 4.	Miss D. B., Pine Grove, Michigan.	57	Right.	Ether and Chloroform	No complication.	———	Good.	V. ⅓.
29	Nov. 5.	Mrs. E. C., Grand Rapids, Michigan.	45	Right.	Ether and Chloroform	No complication.	Nov. 29.	Good.	V. ⅓.
30	Nov. 16.	Miss C. Van Z., Spencer Mill, Michigan.	46	Right.	Ether and Chloroform	No complication.	Dec. 14.	Good.	V. 20-40.
*31	Dec. 3.	Mrs. C. E., Tuscola, Michigan.	76	Right.	Ether and Chloroform	No complication.	———	Good.	V. 20-40.
32	Dec. 18.	W. G., Albertville, Mich.	15	Right.	Chloroform	No complication.	Jan. 8.	Good.	V. 20-40. This cataract was half soft.

The average vision obtained in the above cases is one-third. The test was in each case made very soon after the operation on account of the unwillingness of the patients to remain longer or return for examination, and consequently before the best result of the operation could be determined. For the improvement a short time makes, see case Number 22. The frequent occurrence of iritis was no doubt due to the fact that the general wards where all the clinical patients were treated, are poorly provided with means of ventilation, and heated by steam generated at some distance from the hospital and out of the control of the hospital authorities. A number of times the steam was allowed to get so low that the wards became cold, and it has at all times been difficult to maintain in them that even temperature so essential in these cases. This difficulty is to be immediately corrected.

CEREBRO-SPINAL FEVER: (CEREBRO-SPINAL MENINGITIS); (SPOTTED FEVER).

W. J. HUFF, M. D., SAINT MEINRAD, INDIANA.

In three leading medical journals which I have been reading the present year, not a single case of this disease has been reported, nor has an article referring to it in any way appeared, from which I infer that it has not been prevalent in many parts of this country. Having met with a few cases in my practice, I was induced to investigate the subject, both by reading all the available literature relating to it, and consulting my medical acquaintances, and in this relation I must acknowledge my indebtedness to my friend, Dr. E. J. Kempf, of Ferdinand, Indiana, for much valuable information (especially as regards the history of the malady) derived from an article written by him and reported in the February number of the *Louisville Medical Herald* for 1880.

Nomenclature.—This disease is known by the different names given above, and it has also been called by a late writer "tetanoid fever. Spotted fever is certainly an objectionable name, from the fact that in many of the cases no spots appear from first to last, and on the whole, we think that the first name—cerebro-spinal fever—is the most appropriate.

History.—As to whether the disease made its advent earlier than the commencement of the nineteenth century, we are not prepared to say, but the first epidemic of which we have any history, prevailed at Geneva in the winter and spring of 1805. Since that time the disease has been well known, having prevailed both sporadically and epidemically, in most if not all of the states of Europe as well as the states of the Union. It first made its appearance in France and the United States about the same time, namely 1837.

Bristowe gives this as the first epidemic.

Cause.—Great diversity of opinion and much confusion seem to exist in the minds of medical writers in regard to the ætiology of this disease. Theories, the most adverse, and it seems to us, the most nonsensical in some instances, have been advanced to account for it.

Most of the authorities agree in saying that it is not contagious, though so able a writer as Bristowe, holds a contrary opinion. From the best information I can gain of the present epidemic in this State, there is no evidence whatever, in favor of the theory of contagion. A majority agree that it is infectious. It cannot be claimed that it is due to meteorological influences, as it occured epidemically in France, ninety-seven times in winter, sixty-nine times in spring, thirty times in summer and thirty times in autumn.

It certainly occurs much oftener in the latter months of winter and early spring, when there is a damp atmosphere and rapid and extreme changes in the temperature than at any other time. If it be infectious, the route by which it enters the body; its action there; whether in the form of invisible fungi, microscopic animalculæ or cells, are simply matters of conjecture.

Identity of Causes.—Various conjectures have been made by different writers, as to the identity of causes between this and other diseases. It is held for example by some, that yellow fever, dengue and cerebro-spinal fever, have a common cause. Another believes in the identity of erysipelas and cerebro-spinal fever, and still another declares that hog cholera and cerebro-spinal fever are identical.

So able an authority as Ziemssen, is undecided as to the identity of the cause of typhus and cerebro-spinal fever. This last opinion seems very strange indeed, for it is almost universally admitted, that over-crowding and bad ventilation, are essential to the production of typhus, while no such conditions, at least in this country, seem necessary to the production of the disease under consideration.

The fact is the literature on the cause of the disease is simply "hodge-podge," and I think we had better "throw up the sponge," and admit we know nothing about it.

Exciting Causes.—Of these, we can speak with more certainty. The disease generally attacks children, and rarely adults over fifty years of age. It appears to be somewhat more common among male than females. Rich and poor, high and low, the aristocrat and the beggar, the denizen of the populous city, the villager or the farmer, are alike liable to fall a victim to this frightful foe of the human race. Excessive work, mental or physical, sudden changes of temperature, damp, cold weather, and malaria, may be stated as the chief exciting causes. Exposure in newly plastered rooms, or in rooms with open or damp and cold floors, have been known to bring on an attack.

Symptoms and Progress.—The onset of the disease is sometimes preceded by premonitory symptoms, lasting from a few hours to several days, and consisting of headache, malaise, neuralgic pains in the back, abdomen and limbs; but in many (in our experience nearly all) cases the attack comes on sudden and furious. In either case, the first symptoms of the actual outbreak are rigors, usually severe; intense headache; pain in the spine, abdomen and limbs; incessant vomiting; intense thirst, fever and delirium.

The patient usually becomes extremely restless and irritable, voluble or taciturn, and the subject of delusions. The head in most cases is thrown back more or less, sometimes to such an extent, that the patient when attempting to lie on the back, rests on the top of the head and heels. This usually comes on immediately or within the first two or three days. The patient screams aloud often with the intensity of the pain in the head, back and abdomen. But as the disease advances, the patient becomes less alive to pain and other subjective phenomena; he passes into a state of low and muttering delirium, or wild and maniacal excitement, perhaps attended with convulsions, and then by degrees lapses more or less gradually into profound coma. In a certain per cent. of cases, varying in different epidemics, a purpuric eruption, in greater or less abundance and more or less generally distributed makes its appearance usually from the second to the fourth day. It may not appear until after death. Death may occur within the first day or two, sometimes in a few hours, from collapse; or from this time to the tenth or twelfth day from coma, due to the cerebro-spinal lesions; or at a much later period, up to the sixth or eighth week from asthenia, or from some of the complications, which are apt to ensue.

Such are the symptoms that usually present themselves in a typical case, but as in other diseases there is considerable variation in different cases. The *temperature*, as a rule, is not high, in many cases not above 101° or 102° Fahrenheit; but it may rise to 105° or higher. In some cases it is scarcely above the normal at any time, and may even be subnormal, as in one of my cases. The *pulse* is usually much enfeebled, sometimes very rapid, 120 to 140, in children; sometimes it is preternaturally slow, and again it is almost normal. Respiration in severe cases is slow and labored, but with the increase of depression, quick and shallow. The *bowels* are generally constipated. The *skin* variable. Violent sickness and vomiting are almost constant in the beginning, but generally subside after the first few days. Cutaneous hyperesthesia is present in most cases, and sometimes is extreme. Incontinence of urine is not uncommon. Retention of urine may also occur.

Paralysis, either hemiplegic or limited to a limb or to muscles, supplied by certain nerves, may occur as a complication or sequel. Strabismus, loss of sight, inequality of pupils, contraction, dilitation or immobility of the pupils, may supervene. Injection and hyperæmia of the conjunctivæ are common. Inflammatory affections of the thoracic organs are frequent.

Dr. Kempf divides the disease into cerebro-spinal asphixia, cerebro-spinal fever and cerebro-spinal irritation. Those which die within a few hours, presenting the appearance of deep intoxication, he assigns to the first class; cases running the usual course in the second; the so-called mild cases are put in the third.

Morbid Anatomy.—The morbid changes observable after death are principally the following: Congestion of the vessels of the pia mater of the brain and cord, inflammatory exudation into the subarachnoid tissue, and sometimes into the ventricles of the brain. The congestion of the meninges is somtimes general, but more commonly localized, being confined to the base of the brain and medulla and upper part of the cord. The substance of the brain is often more or less congested. The liver and spleen are generally congested. Emaciation is extreme in protracted cases. Many other changes have been observed, but most of them are rare, or are the consequences of the complications or sequelæ and do not deserve notice.

Prognosis.—Medical men, who have had much experience with this disease, are careful not to give a positive prognosis, for there is perhaps no other disease so likely to give disappointment. The most unfavorable cases sometimes recover, while apparently mild cases prove fatal. Relapses frequently occur and carry off the patient.

Diagnosis.—In the commencement of epidemics, especially when the characteristic symptoms are not manifest at the beginning of the attack and in sporadic cases, it may be difficult to make the differential diagnosis from other forms of continued fever, but when we have a well-marked case, it is easily recognized.

Treatment.—As might be inferred from the diversity of opinions regarding the ætiology, a corresponding diversity of opinions exists in regard to treatment. Being ignorant of the true cause of the disease, our preventive treatment must necessarily be limited. As to curative treatment, it must be acknowledged we have no specifics, and our power to abort or cut short the disease, is not greater than in typhus, enteric or the other specific fevers.

Many remedies have been vaunted as cures, among which may be mentioned, bromide and iodide of potash, quinine, morphine, veratrum viride, calomel, chloroform inhalation, turpentine enemata, sinapisms, blisters, cold and warm bath, ice bags to the head and spine, blood letting, etc. Diet: milk, beef tea, soups, etc., same as the continued fevers. The Americans and Germans favor ice bags to the head and spinal column, while the English prefer the bath or wet packs.

Below I give the history of the two cases that occurred in my practice, with plan of treatment.

Case I.—On April 2, 1881, I was called to see Mr. W.'s child, a well developed boy, six years old. The parents gave the following history: The boy came home from school March 31, well as usual and ate a hearty supper. April 1, early in the morning the boy complained of not feeling well, was seized with a severe chill, followed by intense pain in the head, back and abdomen: fever, great thirst and incessant vomiting. As they supposed it to be ague, they did not think it necessary to send for medical aid. The child, however, grew worse, and I was sent for next morning, but being away from home, I did not see the child till 9 P. M. April 2. I found the temperature 101°, pulse 100, respiration natural, intense thirst, frequent vomiting, severe pain in head and abdomen, wild delirium and extreme restlessness. I gave no positive diagnosis, but expressed it as my opinion, that the case was one of cerebro-spinal fever, and would probably prove a very grave case.

Prescribed bromide of potassium, twenty grains, every two or three hours. Morphia, in small doses to quiet the restlessness, a febrifuge mixture of sweet spirits of nitre and aconite, and cold cloths to the head.

April 3: Temperature not taken. Pain in head, abdomen and limbs, and delirium continued.

April 4: Temperature, 102; pulse, 100; respiration, 24; full and easy. Still delirious and screaming aloud, with pain in the head.

April 5: Incontinence of urine, opisthotonos and hyperesthesia. Other condition same as day previous. Positive diagnosis of cerebro-spinal fever. Limbs flexed.

April 6, 7 A. M.: Temperature, 97½° Fahrenheit; pulse, 108; respiration, 18. At 4 P. M: Temperature, 100¾; pulse, 108. Rational, but pain and opisthotonos continue. Quinia sulphate, four grains. every four hours. Bromide continued with an opiate occasionally. Ice bags to head and spine.

April 7, 8 A. M.: Temperature, 101¼; pulse, 96; respiration, 24. At 2 P. M.: Temperature, 102; pulse, 110; respiration, 24. Dullness in right hypochondriac region above normal limits of liver. Prescribed ten grains of calomel in two doses, four hours apart. Other treatment continued.

April 8, 8 A. M.: Temperatue, 100°; pulse, 120; respiration, 24. At 4 P. M.: Temperature, 103°; pulse, 120; respiration, 23.

April 9, 8 A. M.: Temperature, 103½°; pulse, 120; respiration, 24. At 4 P. M.: Temperature, 103 9-10°; pulse, 126; Respiration, 28.

The temperature was taken morning and evening till the 18th, when it reached the normal. From the 18th to the 30th, the temperature was frequently subnormal, sometimes sinking as low as 95°, but the pulse varied from 100 to 120 all the time. Milk, beef tea, soups and other liquid food were administered regularly and frequently, and stimulants were added when the fever abated. Vomiting ceased after first three days, and patient took food very well most of the time, but mild delirium continued till the 30th, when he became rational and gradually improved until health was restored.

The pupils were widely dilated and part of the time insensitive to the light. Conjunctivitis first two weeks.

Case II.—April 14, 1881: About 3 A. M., I was call to see the six-year-old daughter of Mr. T. The child had gone to bed the evening before, well as usual, but awoke about mid-night, crying with pain in the head and abdomen. ·I found the child delirious and very restless, tossing about from one side to the other, occasionally assuming the sitting or standing attitude, and trying to spring out of bed. Temperature and pulse normal. Intense thirst aad incessant vomiting. Prescribed, bromide of potash, fifteen grains, every four hours or oftener if necessary, for the purpose of relieving the cerebral congestion. Fluid extract of ergot, one-half drachm every four hours; morphia sulphate, one-twentieth grain as often as necessary, to relieve the restlessness and irritability. Ice bags to head and spine.

April 15: Opisthotonos, general cutaneous hyperesthesia—extreme, pain in head, back, abdomen and limbs. Temperature, 99°; pulse, 75; respiration, 20. Bowels constipated. Thirst immense. Urine in large quantities. Continued the bromide, ergot, and ice, and gave quinia, two grains, three times a day. Cathartic at night. From this time till the 22nd, there was but little change, except that the vomiting ceased on second day. On the 22nd, the pain began to abate, opisthotonos subsided, and the patient made a rapid and complete recovery. The temperature never rose above 100° Fahrenheit, and was often normal or subnormal. Patient took nourishment well after two days. Bromide and ergot, with an occasional opiate, and ice to the head, with fluid food, was the main treatment. No eruption in either case.

A CASE OF HOUSE-MAID'S KNEE.

BY W. H. SMITH, M. D., PH. D., ST. CLAIR, MICHIGAN.

On April 5, I saw A. H., who complained of having injured his knee by a fall and as a consequence being troubled with a swelling upon the same. He stated that another doctor had been previously consulted who did not appear to know what was the matter or what to do for it. The thing had been comparatively free from pain, but the gentleman wished to rid himself of it from the fact that it was steadily increasing in size.

Inspection at once revealed a tumor of the size of a goose egg, situated over the patella. Fluctuation was plainly perceptible, and the diagnosis was a matter of no difficulty. Rest and a blister were prescribed, but without any beneficial result. The tumor was then punctured with a trocar, the blood-colored fluid withdrawn, and the part carefully strapped. Although perfect rest was enjoined the tumor rapidly refilled. A blister was then again applied, but proved utterly useless. It was accordingly again punctured, and after the withdrawal of the fluid injected with the strong tincture of iodine. This also failing to benefit, recourse was had to incision with the knife and pressure. The result was no better than before. The incision was disposed to heal without any indication of the obliteration of the cavity. To secure the latter a diluted solution of nitric acid was injected, and afterwards a stronger solution of the same material was employed. This caused some inflammation of the limb, but when that subsided, May 15, the tumor, with the exception of the scar had disappeared, and in the month since intervening has shown no signs of returning.

The above case will doubtless be of interest to some readers, from the fact that so many of the modes of procedure recommended in the books proved absolutely worthless. The nitric acid injection I have not seen advised for this difficulty, but its action in other troubles led to the belief, that it would be beneficial. The tumor in this case was probably rightly referred by the patient to the injury, its walls were quite thin, and the contents apparently did not change in the slightest degree, but from first to last presented the appearance of synovial fluid mingled with blood.

ABSTRACT OF A CLINICAL LECTURE ON TUMORS OF THE MAMMARY GLAND.

BY DONALD MACLEAN, M. D.,
Professor of Surgery and Clinical Surgery in the University of Michigan.
Reported by E. N. HAWLEY, May 22, 1881.

During the current session a large number of important surgical diseases have been illustrated here by actual cases and perhaps no single subject has been more fully represented than that of mammary tumors. To-day I have another, and a very rare case of the kind, to show you, but before doing so I propose to take the opportunity of reviewing the cases which we have already studied and treated.

You will remember the case of Mrs. W., a very stout woman, (weight two hundred and eighty-five pounds), who appeared here on a recent occasion to show the result of an operation which we performed for her in June last. Here is a photograph of Mrs. W., showing the appearance of her breast before operation, and here is one taken a few days ago showing a perfectly healthy and sound condition nearly a year after operation.

Let us recall the main points in the history of this really remarkable case. Mrs. W. is now forty-eight years old. Thirty-two years ago she discovered a hard lump in her left breast, which gave no trouble until two years ago, when it began to grow large and painful. She then applied to a cancer doctor for assistance and he applied escharotic plasters to the number of three hundred or more and from them, patient says that she suffered frightful pain but without any beneficial effect. Before the ulcers left by the escharotic plasters had time to heal, the disease reappeared and grew rapidly. On her admission to the hospital, June 14, 1880, a fungous mass as large as a baby's head projected from the surface and poured forth continually a sanious and fœtid discharge. At first sight it did not seem possible to extirpate the disease by excision. On careful investigation, however, the following all-important facts were noted, namely:

(1) The enormous gland with its great fungous outgrowth was freely movable on the thoracic wall.

(2) The disease was not infiltrated into the skin and surrounding tissues.

(3) The axillary glands were *not* enlarged.

(4) The patients complexion was clear and fresh looking and her general health was not impaired.

On the strength of these four facts I felt justified in recommending an operation and it was accordingly performed at once and the whole mass carefully removed by means of an incision, which measured eighteen inches in length and which owing to the great obesity of the patient, left a very deep and wide chasm, the edges of which I partly drew together by using a large and stiff uterine sound after the fashion of a hare-lip pin, winding a strong silk thread over it.

The case as you know made a rapid and complete recovery and the question arises, What was the disease? The microscope showed masses of epithelial cells and a large proportion of indifferent small round cells (formative). Mrs. W. never had carcinoma or cancer of the breast and the fungoid condition in my opinion was altogether attributable to the irritation of the escharotic plasters.

Had the tumor been left alone altogether it might ultimately have degenerated into true carcinoma and on the other hand it might have preserved its neutral character and given trouble only from its enormous size. At any rate excision was the only efficient and safe method of treatment.

Let me now call your attention to a more recent case. You will recognize this lady as the patient on whom we operated just five days ago. She had a hard tumor of the breast closely related to the skin in the neighborhood of the nipple. The axillary glands were not effected, the breast was freely movable, and the general health good. The tumor had appeared quite recently and was so annoying to the patient that she urgently desried its removal, which was done along with the entire gland. You can see that the wound is almost completely healed and that the patient does not appear to have suffered any serious trouble from the operation. She will leave the hospital in a day or two *cured.* Here is the specimen obtained in this case. You observe that the tumor is very solid and that although pretty intimately related to the breast structure, still it is quite possible to separate it therefrom. To the unaided senses this tumor looks like a mass of firm fibrous tissue and the microscope corroborates this impression. It is a fibroma or fibrous tumor in the breast and it is one of the most benign of breast tumors.

This growth might have been dissected out and the breast saved had it not been for the two following reasons, namely: (1) the uncertainty of the diagnosis; and (2) the fact that it was so situated that the central and most essential portion of the skin as well as the nipple itself were involved and had to be removed with the tumor. A fibrous tumor of the breast situated at any other point might be removed by itself and the breast saved without danger of return, but you must be very sure of your diagnosis and that is not always an easy matter.

Here I show you a very interesting specimen which I obtained a few days ago from a lady seventy-two years old. It is a cyst which is now stuffed with cotton, but which originally contained a red serous fluid. It was very tense and very tender so that I did not manipulate it very much before operation. The age of the patient, the painfulness of the tumor, and its hardness led me to suspect scirrhus, the diagnosis being still further obscured by the fact that the tumor was deeply imbedded in the gland. Still, as the disease had already lasted for some years, and as it seemed to be of very slow growth, and as the patient was in feeble health otherwise, it was only at her urgent request that I consented to operate. Some forms of scirrhus of the breast in old people grow very slowly and are better left alone. However as soon as I discovered that this tumor was a cyst, I determined to dissect it out by itself and leave the breast. Had the patient been a younger woman and had the cyst been of short duration, I should not have excised it without at least trying milder measures first.

I have repeatedly tapped breast cysts and injected pure tincture of iodine and always with the very best result. The suspicion of schirrus was the reason for preferring excision in this case.

Here is a specimen obtained very recently, and which serves to illustrate another class of cases. The patient was a young woman twenty-two years old with a good family history so far as it could be traced. My attention was first called to her case more than a year ago. She had then a well defined but pretty hard, somewhat nodular lump in her right breast immediately under or behind the nipple. I hesitated about operating because the disease was evidently of a local and simple nature, and still could not be removed without destroying the nipple and with it the usefulness of the gland. Of late the tumor had become somewhat painful and slightly increased in size, and it seemed safer to remove it and I did so, taking away the whole gland. You will observe that the new growth is very easily distinguished from the natural gland tissue, that in fact the latter is pushed aside and changed so as to look like a capsule for the new growth. The latter examined microscopically is found to consist largely of epithelium and to resemble very closely the normal breast structure and hence we place it under the head of *Adenoma.* Being thoroughly extirpated, it is not likely to return.

Here is a mass which you saw me excise recently, and which represents the most common form of breast tumor, namely, carcinoma. You will observe that the natural breast tissue has disappeared and in its place we have a dense mass of new formation held together by bands of connective fibrous tissue. The clinical features of scirrhus are familiar to you already for we have had a large number of cases this session. The structural peculiarity of this form of tumor is that it consists almost entirely of epithelium, which, however, differs in appearance and in its natural history from the typical epithelium of the breast. The removal of the whole breast by the knife is the only treatment suitable for this class and if this is to have any chance of affording permanent relief, it must be practiced very early in the history of the case, before the glands in the axilla and the neck have become involved, and before the patient's system has become infected.

In conclusion let me call your attention to this patient, whom you see is a man. In this fact consists the only peculiarity of the case. Breast tumors are very rare in men. I have heretofore seen but two well marked cases of scirrhus in the male. The patient before you is sixty-six years old, and he comes here from his home in Pennsylvania for advice about this tumor of his right mamma. About twelve years ago, while lifting a heavy weight, he struck his breast against a piece of board, and some inflammatory action followed. Since then he has repeatedly injured it accidentally, so that it has been a source of annoyance more or less all this time. On examination now we find that there is a considerable enlargement of the gland and it is very sensitive, it has a hard, firm base, but it is freely movable on the chest wall, the surrounding tissues are not affected, the axillary glands are entirely free and the patient is otherwise in very good health. The skin over the growth is of a dark purple color, but patient says, that that has nothing to do with the tumor, being in fact the remains of a nævus or mother's-mark, which was there when he was born. To which class of tumors does this growth belong? In my opinion it is merely a chronic inflammatory swelling, which has now lasted too long to be discussed by any ordinary treatment. Moreover, notwithstanding its originally, simple nature, there is danger of its ultimately degenerating into a carcinomatous form and therefore, I should recommend its excision as the speediest, safest and most certain method of affording relief.

In prosecuting your researches on the subject of breast tumors, I would strongly recommend you to read carefully the recent works of Dr. Samuel W. Gross, of Philadelphia, and Dr. Charles Creighton, of England.

Dr. Gross has suggested the following "combined genetic and anatomical classification," which appears to me to be at once comprehensive and practical, and I think that you will have no difficulty in placing the cases and specimens, which you have seen in their respective classes.

A.

(1) Neoplasms derived from the periglandular connective, and constituted by connective tissue or its equivalents, of which two divisions may be made, namely—

(*a*) Those which represent perfected or mature connective tissues, and may, therefore, be called typical. These comprise fibroma, or fibrous tumor; myxoma, or mucous tumor; lipoma, or fatty tumor; and chondroma, or cartilaginous tumor.

(*b*) The second division includes those neoplasms which represent embryonic, unripe, or transitional connective tissue, and may be termed atypical. It is limited to the genus sarcoma.

(2) Neoplasms which proceed from the secreting elements, and are composed of epithelium. Of these, adenoma, or glandular tumor, is a typical epithelial growth, while carcinoma is an atypical epithelial formation.

(3) Neoplasms which are derived from and are constituted by higher structures. These are, first, angioma, or a tumor composed of bloodvessels; and, secondly, neuroma, or a growth made up of nerves.

B.

Cysts, which include the formations due to obstruction of the ducts and the accumulation of the secretion of the lacteal glands, and cysts of new formation inclosing echinococci.

EDITORIAL BRIEFS.

Please Pay Up.—The publisher still has on his books names of a few subscribers who have not paid this year's subscription. Please make it convenient to pay soon. To any subscriber the amount is very small, while to the publisner the aggregate is of more importance.

Examinations in Sanitary Science.—The Michigan State Board of Health will hold examinations of candidates in sanitary science on July 12th, 1881. A list of books valuable to these candidates may be found on page 464 *et seq.* of Volume II of The Physician and Surgeon, or can be obtained by application to the secretary of the State Board of Health.

DETROIT MEDICAL COLLEGE.—This school has been thoroughly reorganized and has issued the program of lectures for '81–'82. The course like that of last year is strictly a graded one, and is excellently arranged.

OF the candidates for graduation in the Department of Medicine and Surgery of the University of Michigan, three withdrew from the class before the final examinations, and eight were "plucked," leaving ninety-nine to take diplomas. This, however, is not a true index of the proportion of failures. The course is now a graded one of three years. At the close of each semester examinations are held, and many of those who fail in the examinations of the first or second year, conclude to seek diplomas elesewhere.

MEMBERS of the class of 1878, of the department of medicine and surgery, of the University of Michigan, will be pained to learn that Dr. William Decker of that class was drowned with two companions in the lake near Mount Clemens, Michigan, this last spring. Dr. Decker was also a graduate of the department of science and literature of the University. In student life he had a large number of warm friends, who will sincerely mourn his untimely death. To Mrs. Decker, who is a graduate of the same class in medicine as her husband, we extend our most deeply felt sympathy.

THE MICHIGAN STATE MEDICAL SOCIETY.—The recent meeting of this society at Bay City was slimly attended, but those present made the meeting a profitable one. One cause of the smallness of the number present was the difficulty in reaching the place. From Ann Arbor by the way tickets were given, to attend both days of the session would have required an absence from home of four days.

J. H. Jerome, of Saginaw, was elected president; W. F. Breaky, of Ann Arbor, first vice-president; A. Kinne, of Ypsilanti, second vice-president; S. S. French, of Battle Creek, third vice-president; D. C. Wade, of Holly, fourth vice-president; G. W. Topping, of De Witt, treasurer; G. W. Ranney, of Lansing, secretary. The next meeting will be held at Ypsilanti.

THE ARKANSAS LAW.—Through the kindness of one of our subscribers in that state, we have received a copy of the law to regulate the practice of medicine in Arkansas. In some respects this law is unique. It provides for an examining board in each county. This board, consisting of three persons, is to be appointed by the county judge. There is also to be a State Board of Medical Examiners to whom any one, who has been rejected by the county board, may appeal for reëxamination. We question the wisdom of giving the appointment of the board into the hands of the county judges. Many judges will simply use this power as a political lever. Again it is unwise to have a separate board for each county. We predict that the Arkansas law will practically be of but little avail. Indeed, it has in itself the possibility of being harmful.

NEW WORKS ON SURGERY.—H. C. Lea's Son & Co. announce that they will soon issue, in three volumes of about one thousand pages each, an American edition of Holmes' System of Surgery, thoroughly revised and rewritten. The work will be Americanized and revised by Dr. J. H. Packard, of Philadelphia, assisted by thirty other eminent American Surgeons. The price per volume, in cloth, $6.00, leather, $7.00, Half-russia, $7.50. This will form an admirable companion for Reynold's System of Medicine, which has been appreciated so highly by the profession.

William Wood & Co. will issue an "International Enclycopœdia of Surgery" by authors of various nations. The work will appear in six volumes and will be edited by Professor Ashhurst, of Philadelphia. The most eminent surgeons of America, England, France, Germany and Spain are contributors. The price will be per volume, in muslin, $6.00, in leather, $7.00, in half morocco, $8.00. The first volume will appear in the fall of the present year.

Both of these works will be sold by subscription only.

A NEW JOURNAL.—*Science and Health*, a monthly magazine devoted to general science and to a diffusion of true views concerning the laws of hygiene will make its appearance July 1st. Dr. G. G. Groff, of THE PHYSICIAN AND SURGEON, will be managing editor, and we can promise that the journal will be filled with contributions of practical value. Each number will contain sixteen pages of reading matter. The following articles will appear in the first number: "The Water we Drink," H. B. Parsons; "Are the Planets Inhabited?" Professor G. M. Phillips; "Coeducation in the University of Michigan," President J. B. Angell; "A Plea for Fresh Air," G. G. Groff; "Shall I go to College," Hon. Henry W. Green; "Industrial Drawing," Professor J. V. Montgomery; "How to teach Botany in the Public Schools," Miss Mary Edmonds; "Summer Complaint, and its Treatment," G. G. Groff; "Science Notes," Compiled by Wm. Frear; "Temperance, drinking unprofitable, etc."; "Practical Information;" "How to remove all kinds of stains from clothing;" "Value of House Plants;" "Cheap refrigerators for families without ice houses; "Rules for the Care of the Eyes;" "How to bleach Piano Keys;" "Diamonds and Pebbles;" "Educational Notes;" "Answers to Correspondents;" "The latest books." Subscription $1.00 per year. Address J. W. C. Shamp, Lewisburg, Pennsylvania.

CORRESPONDENCE.

STUDY OF THE CAUSES OF CONSUMPTION.

A systematic study of the causes of consumption has been undertaken by Dr. Edward Playter, of Toronto, Ontario. He has prepared a list of questions to which he desires replies from physicians having well-marked cases of consumption now in hand. To physicians who wish to thus aid the cause of science, he will send a copy of the questions upon receipt of the address. It is hoped that something of value will be secured from a study of a large number of these replies.

Very respectfully, HENRY B. BAKER.

A REPLY TO MR. SMITH.

EDITOR OF THE PHYSICIAN AND SURGEON: *Dear Doctor*—In your journal for June, I see I am charged with aiding and abetting the *persecution* of a student in the medical department of the University, C. A. Smith, on page 269, making the charge which he qualifies slightly by saying "I understand." Permit me to say that I did not understand it in that way; having no knowledge whether the person reported to me as having violated the public health laws was a student in the "regular school" or the homœopathic school, the question of who or what he was did not enter into the statement or consideration of the case, and his name was not mentioned. In response to request received from the local board of health, I cited the law applicable to the case as stated, and I added, that "It is unfortunate that the law does not make the conduct to which you refer a misdemeanor." I stated that the law imposes a penalty not exceeding one hundred dollars for violating the hospital regulations of the local board of health. The question whether Mr. Smith was guilty of violating the law was one to be decided by a court or jury. If he or any other person is proved guilty of violating the law in the manner stated, I think the law should take its course and the penalty be inflicted if possible, without regard to the particular "school" of medicine to which he may belong. As to "abusing official power to persecute a student of the regular school," the charge will probably appear to most of your readers to be a silly one, invented for defensive purposes by a person charged with violating a law, yet I do not wish to rest under it because some may believe it; I therefore most emphatically affirm that there was on my part no thought of persecuting any person, no thought of aiding or abetting persecution, but only to give official advice to a local board of health respecting the enforcement of laws for the restriction of a loathsome disease.

Very respectfully, HENRY B. BAKER.

THE SPREAD OF CONTAGIOUS DISEASES BY IMMIGRANTS.

MEMBERS OF THE MICHIGAN STATE BOARD OF HEALTH: *Gentlemen*—At a meeting of the New Orleans Medical and Surgical Association held May 7, the following resolution was adopted:

"*Resolved*, That the special attention of the National Board of Health be called to the unusual prevalence at the present time of typhus fever, scarlet fever, small pox, and other contagious diseases in the Northern and in some of the Western States. We, therefore, urge the necessity of immediate action, the most rigid railroad inspection from such places, believing, as we do, that they may be considered *dangerously infected*."

There have been reported from various portions of this State, cases of small-pox so that now it may be considered to have been pretty well scattered over the State. So far, the local boards of health have succeeded in keeping the disease from spreading to an alarming extent. In this they have been aided by the fact that by action of this board in years past, thousands of people in the State were vaccinated, and thousands more have been vaccinated this spring. But, although no general outbreak of the disease has as yet occurred, yet, from the great numbers of immigrants pouring into and through this State, and the general prevalence of small-pox in foreign parts from whence these immigrants come, there is danger of such an outbreak, and it seems to me some action should be taken to prevent the further introduction of small-pox into the State. In order that there may be careful thought on this subject before action, I send you the copy of the following letter from Stephen Smith, M. D., committee of the National Board of Health on the Prevention of Small-Pox, and would respectfully suggest that you give this plan some thought and be prepared to take some action at the regular meeting of the Board, July 12, 1881. The letter is as follows:

DEAR DOCTOR BAKER: The only plan by which small-pox, spread by immigrants, can be brought under effectual control seems to me to be this, namely, the concerted action of municipal, state, and national sanitary authorities. The special functions of each might be thus stated. (1) The National Board might appoint Port Inspectors who should examine every immigrant and give cards to each with name and date of inspection; if the person is found protected, give him a white card; if unprotected, vaccinate him and give him a red card with name and date of vaccination. (2) Appoint Inland Inspectors to be located at the great centers where the immigrant trains pass from one state to another, as at Buffalo, Ogdensburg, Pittsburg, Wheeling, Detroit, Cincinnati, Chicago, Saint Paul, Kansas City, Saint Louis. These inspectors could examine the cards, allow those holding white ones to pass, but reëxamine those holding red ones, and if vaccination is not effectual, revaccinate. State authorities could inspect at such points as the immigrants are likely to be diverted from the train and locate in the State. (3) The municipal authorities would follow the immigrant to his home and secure general vaccination of the community.

Would your State Board be interested in taking action in this matter; or do you not suffer from immigrants? The National Board cannot properly act unless state and local boards call for aid. If there was combined action of the State Boards, the National Board could coöperate at ports and inter-state lines, and the whole machinery of sanitary organization could work in harmony and effectually exterminate this pestilence. Immigrants arrive at New York at the rate of six thousand to seven thousand daily, large numbers unvaccinated, and all have been exposed to small-pox in foreign ports. It seems to me that there is a grand opportunity for the sanitary authorities of the United States to combine, each working in its sphere, and give an example of their power to exterminate a plague which will increase for a year or more unless we make such an effort. I have detailed this plan to our health officer and Dr. Harris, and they approve. I think our State Board will ask the National Board to aid in preventing the introduction of small-pox. (Signed) STEPHEN SMITH.

Such an inspection service as detailed need not confine its work to small-pox, but the introduction of typhus fever and other contagious diseases could be guarded against.

I trust this important subject will receive due attention.

Very respectfully, HENRY B. BAKER, Secretary.

LANSING, June 13, 1881.

EPIDEMIC METASTATIC PAROTIDITIS.

MR. EDITOR: There is an epidemic of mumps prevailing at the present time throughout the greater portion of the United States. This epidemic has peculiar features, one of which is its metastatic tendency to the testicles, both of which are most frequently affected. As this metastasis is in dispute among medical authorities, some contending that it takes place but rarely, if at all, and then only from exposure to cold, and others expressing their utter contempt for the transmission by an absolute silence on the subject, it is important to demonstrate, by clinical experience, just what the truth of the matter is.

In an article on this subject in the *Medical Record*, of New York, for April the 30th, ult.; and in another for the *Medical and Surgical Reporter*, of Philadelphia, for May the 7th, ult.; I have attempted to prove, by the meagre materials before me at the time, that the epidemic now prevailing is distinguished from ordinary epidemics of mumps from the fact that metastasis occurs in nine-tenths of all cases, in spite of the most stringent precautions against cold, in warm weather as well as cold.

There seems to be an inherent disposition on the part of the epidemic to seize the testicles, whether the patient remains in bed or is up and about. Females, as a rule, escaping metastasis.

This form of mumps I have termed " Epidemic Metastatic Parotiditis," portraying its distinguishing features and endeavoring to rob it of the terrors it was generally supposed to possess, since the epidemic is a mild one, no deaths having occurred either directly or indirectly from the disease, although the winter just passed has been unusually severe upon all classes.

I call your attention to this matter because I would like to hear from your readers where such epidemics prevail, and whether or not they partake of the characters mentioned. By giving this publication, therefore, you will oblige not only me but your readers also, perhaps. CHARLES H. MILLER, M. D.

PEABODY, KANSAS.

TRANSLATIONS.

Translations from Russian Journals for THE PHYSICIAN AND SURGEON.
BY RALPH D'ARY, M. D., ROMEO, MICHIGAN.

TO PREVENT PITTING IN VARIOLA.*

BY GEORGE CARRICK.

The marks left by small-pox frequently so much disfigure even the most beautiful and pleasant features, giving to their delicate outlines the appearance of coarseness, sometimes rendering them positively repulsive, that physicians, since the remotest antiquity have sought to prevent these marks, or at least to lessen them in degree, by the application of various external remedies. There is no doubt that, a century ago, smooth faces were as scarce in Europe as pitted ones are at this day, thanks to vaccination. At present, also, the excessive intensity of the disease is met with more rarely than before the introduction of vaccination, and owing to the better and more rational methods of treatment used in our century, the pitting is neither so wide nor so deep as it formerly used to be, judging from old paintings and engravings. But even at this day the ravages of small-pox on the face are sometimes sufficiently frightful to remind one of the description Macauley gives of the small-pox that raged in England, at the end of the seventeenth century. . . . .

It is therefore natural, that in order to avert this evil, several generations of physicians have been inventing and applying various local means. The treatment of the pustules may be divided into the surgical and the therapeutic. The former is

*A Paper read before the Saint Petersburg Society of Practicing Physicians.

applied to the pustules separately and consists in puncturing, opening, and cauterizing them. The latter consists in the application of various masks, solutions, and aspersions.

The puncturing or opening of the pustules, with a view to prevent pitting, was practiced by the early Arabian physicians since the time of Al-Rasi, and later by Marguard, Fortis, Holland, Sidobre, Senac, Tissot, de Haen, van Swieten, and Wintringham, and was much opposed by Diemerbroeck and Ludwig. Of course these methods are inapplicable in those cases where the danger of pitting is greatest—those of confluent small-pox.

The favorite remedy for cauterizing the separate pustules was nitrate of silver. Velpeau, for instance, recommends to open every pustule on the third or fourth day and to cauterize it with sharp-pointed piece of this caustic.

Higginbotham, on the third day after the appearance of the eruption applies a solution consisting of

℞.	Argenti nitratis	℈viij.
	Aquæ	℥j.

Marson objects to this solution as too strong.

Alex. Howard, of Quebec, uses only one drachm of the silver nitrate to the ounce of water, and finds that it relieves the heat, itching, and intolerable sensation of distension.

Skoda applies compresses wetted with solutions of corrosive sublimate, with favorable results.

The effect of all these applications is the same:—they coagulate the contents of the pustules and cause them to abort in that way, but frequently also, they fail.

At one time—and perhaps even yet—the favorite remedy in the Paris Hospital for children was the mercurial plaster—a modified and simplified empl. pice cum mercurio, as follows:

℞.	Ung. hydrargyri	25 parts.
	Yellow wax	10 parts.
	Black pitch	6 parts.

M.

Marson praises this preparation especially in cases of variola semiconfluens. But as the latter, even without any local treatment, sometimes leaves hardly any traces, and as in the case of children, even rather deep pits disappear in course of time—partly owing to the growth of the skin, partly to an increase of its elasticity—it is doubtful whether the favorable results of similar cases should really be ascribed to any one remedy used. Al-Rasi, for instance, has left us a long list of prescriptions for various unguents and plasters for the prevention and cure of small-pox pitting, but in practice they have all proved worthless.

How great is the uncertainty of clinicists as to what is the best remedy in these cases, may be inferred from the fact that Niemeyer, with remarkable impartiality, advises the application of cold as well as of the mercurial plasters.

The opinions of such authorities as Gregori and Marson, who have spent over thirty years in the London Small-pox Hospital, or of the famous Vienna professor and dermatologist, Hebra, are worthy of our attention. The latter believes all plasters and astringents to be useless and employs only cold compresses. This plan is commended by Dr. Kurschmann, who thinks that "cold and moisture seem to be the most effective remedies in the treatment of the eruption.

Dr. Marson generally waits until the pustules burst and the exuded matter has dried, when he applies, twice a day, and until the crusts begin to detach themselves, either simply the best olive oil, or a mixture of one-third of glycerine and two-thirds of rose-water. Sometimes he uses cold cream, or zinc ointment, or a mixture of olive oil and lime-water.

Dr. Gregori, however, seems to have lost all confidence in any local treatment, and advises *fresh air* and "any dry powder." He writes: "All endeavors to prevent pitting by means of various masks will prove fruitless."

Dr. George makes some remarkable statements concerning the effects of powdered camphor applied to the face.

When we inquire into the mode of action of the majority of the above remedies, we find that they shield the pustules from contact with the air, and that some exclude the light also. And as it is proved that light and air very decidedly favor the development of the pustules, the above remedies must be successful so far as they succeed in excluding both.

Dr. Copland, for instance, says: "From personal experience I am fully convinced that absolute darkness prevents pitting, and that light favors the purulent secretion in the pustules, and thereby causes deep and permanent pitting."

The masks, besides excluding the light and air, also exert a certain amount of pressure on the pustules, which also lessens the secretion.

But how can we account for those contradictory facts, that sometimes the pitting is hardly noticeable even in cases of confluent variola, while at other times very mild cases of variola discreta leave rather deep pits?

Dr. Kurschmann endeavors to explain this circumstance in the following words: "However, we can never with certainty promise a prevention of deep pits. In those cases where the pox is limited mainly to the epidermis, there naturally do not follow any very noticeable or long enduring pits; but *where the papillary layer actively participates in the purulent inflammation*, the nitrate of silver cannot prevent loss of tissue."

Dr. Moritz Kaposi substantially says the same, viz: "In our efforts to prevent pitting we must not forget, that the deep seated pustules *eo ipso* are accompanied by putrefaction in the papillary layer, and that therefore in all such cases there will remain scars, whilst the pustules limited to the rete will heal without a scar."

From a practical point of view it is impossible to agree with these explanations of Drs. Kaposi and Kurschmann. It is difficult to imagine that slight cases of variola discreta should attack the papilla, and yet we find that sometimes rather deep and permanent pits follow this lightest form of the disease. On the other hand it is equally difficult to accept this explanation in cases where after very virulent confluent variola hardly any pitting is noticeable: for if the papillæ are attacked and destroyed at all, they certainly must be in those malignant cases.

We cannot admit the explanation that the papillæ may be attacked in a light case of the disease, or may escape in a grave one. For we cannot ignore the maxim, which as yet stands undisputed, that *the intensity of variola is measured by the abundance of the eruption.* The varying relation of the degree of pitting to the quality and quantity of the eruption, I think can be explained in a simpler manner, by the different degrees of of elasticity of the skin in various subjects.

Every surgeon knows how great is the difference in the scars remaining on the faces of different people after similar operations or wounds, although their skins in appearance are alike. The same is the case with the scars of variola—on some skins it leaves deep pits, whilst in others they are hardly noticeable. I would also remind you that the variolar eruption at first is vesicular, and that in this stage it is easier to abort it.

In order to abort the pustules there is required: (1) a pressure upon them from without; (2) a certain elasticity of the material exerting the pressure, in order that the pus should not press too much upon the underlying parts; (3) exclusion of air; and (4) exclusion of light.

All these requirements are completely met by a solution of rubber in chloroform—a means invented and employed in the Edinburgh clinic in 1863, by my fellow-student, Dr. Andrew Smarth. Many years before, Graves, of Dublin, had suggested a solution of gutta-percha in chloroform, but he found no followers, as gutta-percha cracks very easily and is not elastic. The same may be said of collodion, which, moreover, transmits the light.

Dr. Smarth's solution is prepared as follows: Take of best rubber, cut it into very small pieces and put them into a four-ounce phial, half full of chloroform. Put in as much as is necessary to fill three-quarters of the phial with the mixture. Shake the bottle every hour, until the rubber is dissolved, forming a thick fluid, like molasses. The face is painted with this solution by means of a very soft brush. The chloroform evaporates speedily and the face remains covered with a rubber coating. At first the mask is light gray and slightly transparent, but in a few days, on account of the super-applied new layers, it becomes black and opaque. The painting is begun as soon as the eruption makes its appearance, and is done from three to five times a day, until the crusts begin to detach themselves on other parts of the body. Wherever it is noticed that the rubber coating has given way and the pus oozes out, a new coat is immediately applied. It is indispensible that the chloroform and rubber should be of good quality, or else the solution will be oily, without compactness or elasticity. I myself have never used any other local means, but I have seen the results of local treatment by means of various ointments, masks, nitrate of silver, and, worse than all, the cold compresses of Hebra, and I must give preference to the method of Smarth, since no other treatment can approach it in efficiency.

It, moreover, completely allays the itching which is so tormenting to the patients.—*Vratsh.*

[TRANSLATOR'S NOTICE.—Dr. Carrick here cites many cases from practice, in illustration of the superiority of the rubber mask over any other application, which we omit. But we must mention the case of one of his patients, of whose face, for the sake of experiment, he covered but the one-half which remained perfectly smooth, whilst the uncovered part was deeply pitted].

Translations from German Journals for THE PHYSICIAN AND SURGEON.

BY M. E. PAGELSON, GRAND HAVEN, MICHIGAN.

CHANGES IN THE BLOOD IN BURNS OF THE SKIN.

Since M. Schultze had shown that in heating the blood to 52° centigrade the blood corpuscles underwent peculiar changes, and since Wertheim not only noticed the same changes after burns of the skin of living animals, but also found crystalized hæmoglobin in the uriniferous tubules, and in one case even in the capillaries of the arachnoid, the thought suggested itself that these changes might be nearly related to the severe symptoms which follow very extensive burns of the skin in man, and which generally lead to death in a short time. This thought took on a more decided form in the researches of Ponfick. The change in the blood corpuscles, the accumulation of particles of the corpuscles in the spleen and bone marrow, and the changes in the kidneys were more closely studied by him, and the opinion was expressed that the wide spread and sudden change in the red blood corpuscles was to be considered the predisposing cause in a certain portion of the acute fatal cases, and also in some of the severe symptoms in those who recover. Von Lesser considered the same subject in his article without mentioning the very similar results of Ponfick, and supported by observations made on scalded animals, as also on some not scalded, but made anæmic, into whose veins the blood of scalded animals had been injected, expressed the opinion that the rapid death after burns was caused by an acute oligocythæmia, or want of red blood corpuscles, in a functional sense; that, as the severity of carbonic oxide poisoning depended on the number of blood corpuscles changed by it, so in burns it depended on how many corpuscles had been made functionally inert by the heat; that the unfitness of the blood, in severely burned persons, for performing the work of respiration was shown when it was introduced into animls which had been made anæmic by bleeding. If on a superficial perusal, this article gives the impression that the subject has been treated very thoroughly and from many points of view, it will soon be evident on a closer examination, that really nothing entirely new is brought forward, and especially that the final assertions of the author are entirely without foundation. He has not decided in an experiment how much hemoglobin had been dissolved in the blood plasma, nor in any one of the experiments has he settled whether the blood and especially the blood corpuscles were able to take from the air any essential amount of oxygen.

I eagerly availed myself of an opportunity, offered me through the kindness of my colleague Dr. Sonnenburg, of examining the blood of two persons fatally burned, in order to determine, first, whether the amount of hemoglobin in the corpuscles and in the plasma of the blood of the dead subject could be easily and correctly estimated; secondly, whether this blood contained changed hemoglobin or other recognizable substances which could be traced back to broken down blood corpuscles; lastly, whether the blood of burned persons could sufficiently effect the loose union of oxygen with the hemoglobin.

The results were completely decisive, namely:

(1) The relative amounts of hemoglobin in the corpuscles and in the plasma could be easily and accurately ascertained.

(2) The blood of burned persons contained besides hemoglobin no other recognizable products of disintegration.

(3) Like normal blood, this blood took up oxygen easily and in sufficient quantity.

(4) The number of broken down blood corpuscles can only be very small, even in very severe but not long continued burns, which lead to certain death.

The cases were: One, a boy, four years old, the burn covering more than two-thirds of the surface of the body, chest and abdomen as hard as a board. Temperature when admitted, 36.4° centigrade. The child died about three hours after the accident, being somnolent at the last. Death was caused during emesis by particles of food entering the air passages. The autopsy was held fifteen hours after death, when the left side of the heart was found pretty well contracted, the right ventricle dilated and flabby, the blood everywhere without coagula, the kidneys full of blood, without extravasations.

The second case was that of a young woman, twenty-four years of age, whose clothes had taken fire while she was boiling some grease and turpentine. The burn was mostly of the second grade, going somewhat deeper in some places on the extremities, and covered the whole surface of the body, with the exception of the anterior part of the abdomen and a small part of the thigh. Temperature when admitted 37.4°, slowly sank to 36.5°, then to 35.5°, then drowsiness and Cheyne-Stokes's breathing. Death occurred seven hours after the accident. Convulsive twitchings before death.

Postmortem Appearances.—In both sides of the heart thickened blood with buff coagula and large white clots of white blood corpuscles; red infiltration of the endocardium; no ecchymoses in the heart; lungs quite full of air, rich in blood, which was clotted in the smaller and medium sized vessels, catarrh of the small bronchial tubes; œdema of the posterior part of the lungs; in the bronchial tubes some of the contents of the stomach; the spleen somewhat large and quite full of blood; kidneys small, normal, rich in blood in the medullary and cortical portions; liver flabby, small; hyperæmia of the pia mater and brain substance.

Immediately after the autopsy, I received in the first case, some blood out of the heart, in the second, blood out of the right side of the heart, some out of the left side, a portion taken from a vein four hours after death, and beside this three hundred cubic centimeters of urine, which had been removed by catheter about two hours after the accident. The bladder had remained empty since then, the excretion of urine not going on.

The separation of the corpuscles from the serum of the blood, was accomplished by adding to it a one-tenth saturated solution of sodium chloride. The blood was mixed with the sodium chloride solution, all clots being carefully crushed and washed, and no drop of the combined mixture lost. The fluid, containing the floating corpuscles, was filtered after standing a short time, the filtrate, poor in corpuscles, left standing in a suitable vessel a few hours, then the upper clear solution decanted. The whole of the remaining fluid was left until the next day, then as far as possible was decanted perfectly clear, and in two of the analyses could then be added to the first clear portion, but in the other analyses a complete separation of the corpuscles could not be made, and therefore, a large portion of serum containing corpuscles had to be decanted. The residue of corpuscles and of crushed clots was then exhausted with water, only traces of coloring matter remaining in the fibrin clots, and the solution filtered. In order to compare the color of the fluids after their volumes had been measured, one drop of sodium lye was added to each one hundred cubic centimeters, because the serum sodium chloride solutions, especially those containing corpuscles, were always a little turbid and the corpuscles, needed to be dissolved in the fluid. The solutions then cleared in a few minutes, without the decomposition of a trace of hemoglobin. The comparison was made in white, reflected light, in tubes six centimeters in diameter, chosen so large because of the very slight coloring of the clear serum solution. To measured amounts, both of the corpuscle solution, and of the turbid decanted serum solution, were added measured amounts of water, as described in my "Hand-book of Physiologico-Chemical Analyses," until the color of the mixtures was the same as that of the clear serum solution. Since now the amount of dissolved hemoglobin in the serum of the turbid solution was the same as that in the clear-decanted portion, the quantity of water added to produce the color, gave the amount of hemoglobin which was to be attributed to the corpuscles.

(TO BE CONTINUED).

BOOK REVIEWS.

DRUGS THAT ENSLAVE: THE OPIUM, MORPHINE, CHLORAL AND HASHISCH HABITS. By H. H. Kane, M. D., New York City. Philadelphia: Presley Blakison, 1012 Walnut Street, 1881.

This little book treats of the symptomatology, prognosis, and treatment of the various "habits," satisfactorily to the professional reader, enabling him to have his treatment of similar cases tried by the accumulated experience of a specialist, instead of referring him merely to "general principles." The author evidently has spared no pains to obtain the views of practitioners from all parts of this continent and of Europe, and honestly gives the opinions of specialists differing with himself. The book abounds in histories of typical cases, which are very valuable illustrations of the manner of treating those unfortunate inebriates. After a careful perusal of the book the reader cannot help but feel that he is now pretty well prepared to treat such cases. We hope that this little work will aid in rescuing this rather neglected branch of therapeutics from the hands of the quacks who fill the daily papers with their advertisements.

A GUIDE TO THE CLINICAL EXAMINATION OF PATIENTS AND THE DIAGNOSIS OF DISEASE. By Richard Hagen, M. D., Privatdocent in the University of Leipzig. Translated from the second, revised and enlarged edition, by G. E. Gramm, M. D. Boericke & Tafel, New York, 1881. Cloth; pages, 207.

This little work gives a great amount of useful information, which could otherwise be obtained only after reading a large number of works. "How to examine a patient" is often a question of much importance and one which many of us do not sufficiently consider. Dr. Hagen first gives the methods of making general examinations and then proceeds to particular diseases. He gives the means of diagnosis with much exactness. The chapters upon auscultation, thermometry and fever, examination of urine, etc., are very satisfactory. The Germans surpass all others in diagnosis and here we have a condensed work devoted to that subject written by one of the best German diagnosticians. The translation has been well done.

A TREATISE ON THE DISEASES OF THE NERVOUS SYSTEM.

By William A. Hammond, M. D., Surgeon-General U. S. Army (Retired list); Professor of Diseases of the Mind and Nervous System in the medical department of the University of the City of New York, etc., with 112 illustrations. Seventh edition, re-written, enlarged and improved. Cloth; pages, 930. New York: D. Appleton & Co., 1881.

The first edition of this work was published in 1871. It remained without essential change until the appearance of the sixth edition in 1876. It was then entirely remodeled and greatly enlarged. The seventh edition has also received extensive additions. New chapters have been added upon myxœdema, syphilis of the brain, the spinal cord, and the nerves; on the symptomatology of cerebral and cerebellar lesions, and a new section on diseases of the sympathetic nervous system. Additions have been made to the chapters on locomotor ataxia, progressive facial atrophy, chorea, epilepsy, neuralgia, and to many others to less extent. Chapters on insanity have been omitted, because the author is now engaged in preparing a work upon this subject.

The fact that the volume has passed through so many American editions in so short a time, and that it has been translated into French and Italian are sufficient evidences of the high esteem in which the work is held by the profession throughout the civilized world. It is now the most exhaustive and satisfactory treatise on the subject that we have.

A MANUAL OF ACCIDENTS AND EMERGENCIES, OR HOW TO AVOID ACCIDENTS AND WHAT TO DO WHEN THEY OCCUR,

with notes on the preservation of health, including The care of the sick; Food for the sick; Administration of medicine; Family Medicines; Rules for the care of the eyes; Suggestions in reference to dress; Suggestions on selecting homes; Rules for bathing: Signs of death; How to prevent the spread of Infectious diseases; Health maxims, etc. Compiled for the use of Teachers, Parents, Students, and the industrial classes. By Geo. G. Groff, M. D., Professor of Physiology and Natural History in the University of Lewisburg, Pennsylvania, Author of Science Charts, Assistant Editor of THE PHYSICIAN AND SURGEON. Pasteboard; pages, 92. Price, 50 cents. For sale by Sheehan & Co., Ann Arbor.

The above index of the contents shows the nature of the work. It is just what every physician should desire to see in the hands of all his patients.

ANATOMICAL PLATES. Arranged as a companion volume for "The Essentials of Anatomy" (by William Darling and A. L. Ranney), and for all works upon descriptive anatomy, comprising 439 designs on steel, by Professor J. N. Masse, of Paris, and numerous diagrammatic cuts, selected or designed by the editor, together with explanatory letter-press. Edited by Ambrose L. Ranney, A. M., M. D., Adjunct Professor of Anatomy and late Lecturer on Genito-Urinary Surgery in the medical department of the University of the City of New York, etc. New Pork: G. P. Putnam's Sons, 1881. Price, $3.00.

These are the best anatomical plates for the money in the market. Indeed, we think the volume much preferable to the more costly plates. Every line is distinct and the explanatory notes are conveniently arranged on the opposite pages. This places a complete set of anatomical plates within the reach of every physician and medical student. We would especially recommend it to medical students who are reading anatomy.

THE STUDENT'S MANUAL OF HISTOLOGY FOR THE USE OF STUDENTS, PRACTITIONERS AND MICROSCOPISTS. By Chas. H. Stowell, M. D., Assistant Professor of Histology, and Instructor in the Physiological Laboratory of the University of Michigan. Illustrated by 192 engravings; cloth; pages, 279. Geo. S. Davis, Detroit, 1881.

This is intended especially for laboratory work and especial attention is given to the preparation of specimens. The general interest in the study of normal and diseased tissue by the aid of the microscope has created a need of small, concise practical works, giving the necessary instruction. The author states that it is not the design of this manual to supplant the large text book of Stricker or the complete atlas of Klein, which are too full and expensive for the student. The work is admirably adapted to the purpose for which it was writien.

SCRIBNER for July. Century Company, 743 Broadway, New York. Subscription price, $4.00; single numbers, 35 cents.

The July number contains a paper of special and timely interest, "The People's Problem," in which the writer takes the ground that the time has come for the people of this country to exercise their right to "alter the government."

SAINT NICHOLAS for July. Century Company, 743 Broadway, New York. Subscription price, $3.00; single numbers, 25 cents.

The July number contains many brilliant features for vacation time, including chapters of two capital serials for boys, by Rossiter Johnson and W. O. Stoddard; "How to Stock and Keep a Fresh-Water Aquarium;" a full-page portrait of Dengremont, the boy-violinist; "Stories of Art and Artists," with some exquisite reproductions, etc.

THE

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ORIGINAL ARTICLES.

RETENTION OF URINE OR ISCHURIA.

BY VICTOR C. VAUGHAN, M. D.,
Assistant Professor of Physiological Chemistry in the University of Michigan.

By retention, we mean that the emission of the urine from the body, after its excretion by the kidneys is either partially or completely arrested. It is important to remember that in retention, the urine has been excreted by the kidneys and only its ejection from the urinary passages is retarded. If the kidneys fail to perform their function and the constituents of the urine remain in the blood, we designate the condition by the term suppression, which is of a more serious nature than retention.

As has already been stated, the emission of urine from the passages may be either partially or completely arrested; consequently there may be either *partial* or *complete* retention. Again, the urine may be detained in the pelvis of the kidney or in the bladder. Renal calculi may become impacted in the ureters and interfere with the passage of the urine along these channels. The water, thus retained, exerts great pressure and in the majority of instances, the obstruction is forced on down the ureter and into the bladder; but in other cases, the stone is too large to pass through the ureter, and the urine is retained in the pelvis of the kidney and there decomposes. This form of retention is seldom or never complete, since both ureters are not likely to be occluded at the same time. While the excretion of one kidney is wholly prevented from entering the bladder, that of the other kidney may have a free exit and be perfectly normal in its composition. In this case, an analysis of the urine passed would give us no idea of the nature of the obstruction. But generally the retention on the affected side is not complete or does not remain so for any length of time, and sand and gravel, parts of the obstructing bodies, are washed into the bladder and out through the urethra, thus enabling one to decide upon the character of the obstruction and to direct his treatment accordingly. If the passage along the ureter be permanently arrested, the retained urine, by its constant pressure in all directions and by its poisonous principles generated by decomposition, reacts upon the kidney causing structural changes in that organ. The distention of the pelvis of the kidney by the retention of urine and the consequent formation of pus, may be so great as to present a tumor easily recognized both by touch and sight. I have known more than one physician to pronounce one of these tumors, an enlarged spleen. The ammoniacal urine with the products of the structural changes in the organ may be gradually absorbed, and the sufferer, if he has a large life-bank deposit, may recover and live comfortably with only one kidney. But so far as my experience goes, recovery, after the absorption of a kidney in this way, is a rare exception and not the most common termination. But there are various ways in which this matter may escape. It may form a lumbar abscess. It may, even after months, force its way down the ureter into the bladder, and be voided with the urine from the other kidney. It may break into the abdominal cavity causing peritonitis and speedy death. But to my mind, the best avenue of escape is afforded by the knife of the surgeon or the needle of the aspirator.

Urine is more frequently retained in the bladder than in the kidney, and it is fortunate for both patient and practitioner that this is the case; because the obstruction is more easily removed. The retention of urine in the bladder causes great physical pain and much anxiety of mind. The sufferer fears that his bladder will burst; but this is a very rare result. Sometimes the urethra bursts behind the obstruction and extravasation of urine follows. But even when no rupture occurs, most disastrous consequences follow, if relief is not obtained within three or four days. Again, the urine by its pressure and poisonous properties reacts upon the kidneys causing structural changes in those organs and consequent suppression of urine. In this case both kidneys will be likely to be affected, and the complete suppression or anuria which may follow, if not quickly relieved, can scarcely fail to cause death.

Of the two kinds of retention, complete and partial, the latter, strange as it may at first seem, more frequently terminates fatally. If the retention be complete, the pain and anxiety cause the person to seek immediate relief. which the surgeon can always afford in one way or another. On the other hand, if there be any escape of urine, the frequent desire to micturate, or in some instances the constant dribbling, stillicidium, consequent upon the continued accession of urine to a bladder already distended or irritated by the ammoniacal fluid, deceives the patient. He thinks that he is passing too much instead of too little water. Even men eminent in the medical profession have suffered from retention, when they believed that they were passing too much water. In cases of this kind the amount of urine is not measured but guessed at. This guessing is based upon the frequency of micturition or in constant dribbling by the moisture imparted to cloths. These are most uncertain data and the scientific physician will not build upon the sands of uncertainty, *In every case of incontinence in the adult, suspect retention.* Use your catheter even if the patient does remonstrate and assert that he has passed "five gallons" of urine within the last twenty-four hours. Incontinence is a symptom of retention. Moreover, when the bladder is distended, it may be felt through the abdominal walls as a tumor extending from the symphysis pubis up to the umbilicus. Generally, fluctuation can be produced, but this is not invariably the case; for sometimes the walls of the bladder are stretched so tightly that it feels like a hard tumor and not the slightest wave will be perceptible to the sense of touch.

It must be borne in mind that retention is only a symptom and its cause should be ascertained. Many circumstances are capable of interfering with the free emission of urine. These causes of obstruction may arise within or without the urinary passages. Those originating within are atony of the bladder, inflammation of the neck of the bladder, enlarged prostate, stricture of the urethra, and foreign bodies.

Sometimes persons are compelled, or rather they fancy they are, to neglect the duty of emptying the bladder as frequently as nature demands and after prolonged voluntary retention, they may find that their ability to micturate has been lost. The muscular fibres of the walls of the bladder have, by over distention, lost their contractility. The organ has been deprived of its propelling power. There is no force sufficient to produce relaxation of the sphincter. This is *atony* of the bladder and must always be distinguished from paralysis. The latter is always due to some nerve lesion and the cause lies outside of the urinary passages. In atony, the tone of the muscular walls lost by one prolonged voluntary retention, may never be regained, and the use of the catheter may be required three or four times a day ever afterwards. In other instances, complete recovery follows upon emptying the distended organ. Tonics, with cold injections and the careful application of electricity may do much toward restoring the lost power to the muscles.

Sir Henry Thompson recommends the application of electricity in the following manner: "To one pole, the ordinary handle and moist sponge are attached, which is placed over the lumbar vertebræ; an elastic bougie, containing a conducting wire, and tipped with metal, is attached to the other pole and introduced into the bladder. A weak current is set going, and its effects watched. Thus a slight sensation only is to be produced. This accomplished, you should move the bougie about gently in contact with the walls of the bladder, the urine having been just withdrawn; and finally let it rest a little in the neck of the bladder, where the greatest discomfort is felt; in all allowing the current to pass for eight or ten minutes before withdrawing" (Diseases of the Urinary Organs, third edition, page 208).

Atony of the bladder may result also from enlarged prostate. The increased strain upon the muscles in the constant endeavor to overcome the obstruction proves too great and the walls become thin and powerless. In these cases, the retention comes on gradually and is seldom complete. It is not necessary that the prostate appear large when felt through the rectum. The median portion, so-called middle lobe, may protrude and act as a valve preventing the outward flow of the urine. What can we do in these cases? This is the old question, what is the treatment of enlarged prostate? Can the obstruction be removed? For centuries, careful minds have sought a satisfactory solution for this question. Medical men have labored in vain to find a means of removing the hypertrophied tissue. Hemlock, iodine, bromine, ergot, pressure and electricity have all been recommended. Each has appeared as a star of hope and proved to be an ignis fatuus. Of the means mentioned above, ergot has not been sufficiently tried for us either to condemn or laud its action. Its claims certainly deserve farther and more thorough investigation. But it must be acknowledged that at present, the treatment of the enlarged prostate belongs to the surgeon rather than to the physician. Compressing, crushing and ligating the protruding part and catheterism have all been tried by the surgeon. He now considers the catheter as the specific for the retention from enlarged prostate. He teaches the patient to use the instrument and directs him to draw his urine three or four times a day. In some cases this works admirably and the patient passes his catheter with perfect ease. In others there is continually more or less inflammation and consequent pain. This may be relieved by hot hip baths (water at from 104° to 110° Fahrenheit), fomentations to the perinæum and the judicious use of opium. The latter prevents the pain consequent upon the constant straining in involuntary attempts to micturate. Again, irritation may be caused by the urine being either too acid or ammoniacal. In the latter instance, the bladder should be frequently washed out; while in the former, an alkali may be administered. Of one thing I must caution you. Suppose that you are called to a patient who has suffered for some time with retention. The bladder is greatly distended and may contain several pints. You pass an instrument with ease. Shall you draw off all the water at once? No, it is not safe to do so; for many cases are upon record, where fainting, depression and death followed the withdrawal of all the urine, at once, from a bladder that has been greatly distended. A patient has fallen dead at the feet of the surgeon as soon as the water ceased to flow and the fact has been made the subject of legal investigation. (See "Diseases of the Prostate," fourth edition, page 241 *et seq.*) Draw off a part of the urine and although the tumor may still appear quite large, the patient will feel relieved. The catheter should be used again within two or three hours. The surgeon should exercise especial care and gentleness in his first professional dealings with the old man who suffers from enlarged prostate (it is senile hypertropy that is to be understood by the term, enlarged prostate). The infliction of any unnecessary pain produces timidity. With that reluctance to the use of the instrument, natural to the non-professional man, a few moments experience with an awkward or a careless attendant may lead the former to have a holy horror of the catheter. He regards it as an instrument of torture instead of one of relief. This would be very unfortunate, since the duty of the attendant is to instruct the patient how to relieve, not how to torture, himself.

Inflammation of the neck of the bladder has often been mistaken for hypertrophied prostate. It is unfortunate that the term "enlarged prostate" has come into general use among medical men. The term is indefinite since the nature of the increase in size is not expressed. The difference between hypertrophy and hyperplasia is not sufficiently regarded. This lack of scientific accuracy has given no little trouble. It requires no supernatural mental acumen to understand that there is a difference between undue development of normal tissue and increase in bulk from the formation of abnormal tissue. The two are unlike in origin, in development and in their effects upon the system. Nevertheless, these conditions have been strangely confounded by medical men. All instances of increase in size of this gland have been classed together, without any reference to the origin or the nature of the increase. I would not have you discard the expression, enlarged prostate, but I would have you restrict it to a certain class; enlarged prostate should be used only to signify hypertrophy of that gland. Sir Henry Thompson. who is the best authority upon the subject, has never known "an instance of its occurrence at so early a period as fifty years of age." (Diseases of the Prostate, fourth edition, page 140). Inflammation of the neck of the bladder with consequent retention occurs in younger men and is generally subsequent to an attack of gonorrhœa. The patient, with the venereal disease yet existing, has exposed himself to the cold, taken an excess of alcoholic drink, or allowed himself to become excited by sexual passion. Consequently, the prostate gland becomes inflamed and swollen. The subject finds that he is unable to empty his bladder. The gonorrhœal discharge is partially or completely arrested. The patient becomes feverish and suffers severely from pains in the abdomen and perinæum. Formerly the treatment consisted in the administration of large doses of opium, drawing of blood and the use of hip baths. These, one or all as the nature of the case demands, may be used as adjuncts but more decided measures must be taken. It was once thought that the catheter should not be used in these cases as it would only heighten the inflammation. But it would be very unwise to allow the urine to be retained even for twenty-four hours. Atony of the bladder might result. Immediate relief is demanded and is best obtained by the careful, yet unhesitating use of the catheter. But the repeated use of this instrument in such cases must certainly be avoided.

Organic stricture not unfrequently exists as a hindrance to the free emission of urine. Generally stricture exists for many years before there is complete retention. In many instances three stages may be observed. These are (1) dysuria, when the urine is passed in a small stream and with difficulty; (2) strangury, when it issues only in drops and with much painful straining; (3) ischuria, or complete retention. If some urine still passes through the natural channel, there should seldom be any difficulty in passing a catheter. In the majority of cases of this kind, the patient is accustomed to the use of the instrument. In other instances, the urethra is completely occluded. Again, there may be false passages made by yourself or by some one who had previously attempted to give relief by means of the catheter. These false passages are easily made and may become so complicated that it will be impossible for the most skillful hand to pass a catheter into the bladder, What should be done is such a case as this? Again large doses of opium and the application of hot hip baths may obviate the straining and cause general relaxation, then the urine may flow voluntarily or the catheter may be passed with ease. The administration of chloroform will often produce the same results and more speedily. But suppose that all these measures have been tried without success, what is to be done next? The bladder *must* be emptied; this is a necessity. The methods still at our command are (1) either rectal or suprapubic puncture of the bladder; (2) external perineal urethrotomy; (3) tapping the urethra at the apex of the prostate, unassisted by a guide-staff.

By means of the aspirator, puncture and consequent relief of an over distended bladder is rendered both easy of execution and free from danger. A capillary trocar is attached and with a rotary movement, accompanied with gentle pressure is forced into the tumor above the pubes. The stopcock is then turned and the urine drawn off. The bladder may be punctured many times in this way and no injury result. This method is valuable not only in cases of stricture, but in retention from any cause when catheterism is not practicable or advisable. If an aspirator cannot be obtained the puncture may be made with a fine trocar; but the aspirator is much more convenient and safe. With a trocar the bladder may be punctured through the rectum just behind the prostate. In enlarged prostate the rectal puncture should not be attempted. After drawing off the urine by means of the aspirator for some days, the stricture is often relieved to such an extent as to render catheterism easy. Dr. Dox, of Geneva, New York, punctured a bladder above the pubes six times within eight days. At the expiration of that time, the ability to micturate per urethram had been regained. The puncture was made with an ordinary trocar, one line in diameter; the instrument being withdrawn after each operation. The recovery was complete. (See *Medical Record*, June 1, 1872.)

External perineal urethrotomy with a guide is performed as follows: A capillary whale-bone guide-bougie is carried into the bladder; a tunnelled steel staff or catheter is passed over the guide up to the stricture. The patient is placed in the lithotomy position. An incision is then made in the median line of the perineum, exposing the end of the catheter or large staff. Each lip of the incision made into the urethra is secured by a loop of thread, which is to be held by assistants, one on each side. These are known as Avery's threads, from the operator who first employed them, and are very useful as guides in continuing the operation. With a small bistoury the surgeon then follows the minute black line of whale-bone through the stricture. The catheter now glides into the bladder and the urine is drawn off. By this method, the surgeon both relieves the bladder and opens the stricture. But in some instances, not even the capillary whale-bone guide-bougie can be introduced into the bladder. The stricture may be impassable.

In impassable stricture, Mr. Edward Cock, of London, has introduced the method of tapping the urethra at the apex of prostate without the assistance of the guide-staff. The only instruments that he requires for this operation are a "broad double-edged knife with a very sharp point, a large probe-pointed director with a handle, and a canula or female catheter modified so that it can be retained in the bladder." The patient is placed in the lithotomy position. The left fore finger is carried into the rectum and its tip lodged at the apex of the prostate. The knife is plunged boldly into the median line of the perineum and its point directed toward the tip of the finger at the apex of the prostate. The vertical incision is made as large as desirable. When the point of the knife has nearly reached the tip of the finger, the former with a slight inclination to either side should be advanced and can scarcely fail to pierce the urethra. "In this operation, it is of the utmost importance that the knife be not removed from the wound and that no deviation from its original direction be made until the object is accomplished." The fore finger is still kept in position and the knife withdrawn. The grooved director guided by the finger is carried through the wound into the bladder. The left hand, now removed from the rectum grasps the director, while with the right the canula or catheter is passed along the groove into the bladder. The canula may be secured in position and left as long as necessary. The bladder should be washed out at intervals. The above is taken from Mr. Cock's description of the operation. (See Guy's Hospital Reports, Volume XII, page 267, or Gouley on Diseases of the Urinary Organs, page 232, *et seq.*)

We have yet to consider those causes of retention which originate outside of the urinary tract. The distinction between atony and paralysis of the bladder has already been pointed out. The former is of frequent, and the latter of rare occurrence. Paralysis of the bladder is always due to some lesion of the nerve centers. It has been known to follow diseases of the brain and the many affections of the spinal cord. It may appear gradually or suddenly, according to the nature of its cause. Thus, when due to the pressure of a tumor upon the nerve substance, the paralysis comes on gradually. Every day the urine is ejected with less force, until complete paralysis of the walls of the bladder, and consequent, complete retention follow. The retained urine decomposes producing cystitis with its accompanying evils. After the bladder is completely filled with the urine constantly descending through the ureters, the pressure in all directions overcomes the resistance at the neck of the organ and continued *overflow* occurs. The vital necessity of distinguishing this overflow from true incontinence has already been insisted upon. In paralysis of the walls of the bladder, the catheter must be used constantly and with much gentleness to avoid causing any irritation. The viscus should be repeatedly washed out with warm water.

Partial retention is much more frequent in the female than in the male, and in the former it is in the majority of cases due to causes originating outside the bladder. Retention in the female is generally a symptom of displacement or other abnormality of some of the pelvic organs. The writer has had but little experience with retention in the female and will close this paper by quoting the suggestions and conclusions given by Dr. Croom in a valuable paper upon "Retention in the Female," (*Edinburgh Medical Journal*, May 1878), Dr. Croom classifies the causes as follows:

"(1) Injuries or contusions during labor, acting directly or by subsequent inflammations.

"(2) Pressure of displacements or tumors acting mechanically on urethra or neck of bladder.

"(3) Injuries or growths acting reflexly.

"(4) Diseases of the nervous system.

"(5) Direct obstruction within the tube of the urethra, as from stricture or foreign bodies, such as a calculus."

The suggestions for examinations are as follows:

"(1) In all cases of retention a vaginal examination is necessary.

"(2) A gum-elastic male catheter of medium size, without the stilette, is the best form of instrument to employ.

"(3) In retention from displacement it is important to remember the altered position of the urethra. In retroversion of the gravid uterus the vagina is drawn upwards, and forwards, the meatus drawn upwards, and the direction of the upper part of the canal is backwards and downwards.

"(4) When any difficulty exists in accounting for the retention a visual examination should be insisted on.

"(5) It is a safe rule before giving a definite verdict on any pelvi-abdominal tumor to empty the bladder."

AN ANALYSIS OF THE CANE SUGARS OF THE MARKET FOR GLUCOSE.

BY HARRY F. McCREA, Ph. C., Battle Creek.

This analysis was attempted to determine the comparative value of the different grades of cane sugars of the market by estimating the amount of glucose they contained, without any special attempt to determine whether it was the result of sophistication or a natural constituent. The method used for this analysis is known as the "Volumetric Method by Permanganate." The following is a brief outline of this process:

The reagents used are Fehling's solution made in the usual way; but no definite strength being required. A perfectly pure tersulphate solution, $Fe_2 (SO_4)_3$ made pharmacopœially, diluted with two volumes of water and strongly acidulated with sulphuric acid, and a decinormal solution of permanganate of potassium ($K Mn O_4$), standardized with pure ferrous iron. A gram or so of the suspected sugar is placed in a graduated flask. It is dissolved in distilled water and diluted to the mark. If the glucose be greatly in excess or in any amount over five per cent., its presence can easily be determined by its comparative insolubility in water. The cane sugar or sucrose dissolves first, leaving the glucose in the bottom of the flask in chalk-like specks or nodules. A certain number of cubic centimetres of this solution are now taken and placed in a beaker, an excess of Fehling's solution added and the whole heated upon a water-bath for twenty minutes at a temperature not exceeding 70° centigrade, at which temperature sucrose will not reduce Fehling's solution. The cuprous oxide formed is thrown upon a filter and washed. It with the filter is then transferred to the same beaker and the tersulphate solution added in excess. A ferrous salt is produced which is immediately titrated with permanganate. And from the number of cubic centimeters of this solution used, the amount of glucose is calculated, thus:

Two molecules of glucose will exactly produce 5 Cu_2O, then,
$5\ Fe_2(SO_4)_3+5\ Cu_2O+5\ H_2SO_4=10\ Fe\ SO_4+10\ Cu\ SO_4+5H_2O$, and
$10\ Fe\ SO_4+2\ KMnO_4+8\ H_2SO_4=5\ Fe_2(SO_4)_3+K_2SO_4+2\ MnSO_4+8\ H_2O$.

Hence,

$$\left\{\begin{matrix}\text{2 glucose}\\ 2\,C_6H_{12}O_6\end{matrix}\right\}=\left\{\begin{matrix}\text{5 cuprous oxide}\\ 5\,Cu_2O\end{matrix}\right\}=\left\{\begin{matrix}\text{10 fer. sulp.}\\ 10\,Fe\,SO_4\end{matrix}\right\}=\left\{\begin{matrix}\text{2 pot. perm.}\\ 2\,K\,MnO_4\end{matrix}\right\}$$

$$\begin{matrix}\text{or omitting second}\\ \text{and third steps}\end{matrix}\left\{\begin{matrix}2\,C_6\,H_{12}\,O_6\\ \text{360 parts}\\ \text{1 part}\end{matrix}\right\}=\left\{\begin{matrix}2\,KMnO_4\\ \text{312.2 parts}\\ \text{.8783+ parts}\end{matrix}\right\}$$

Each cubic centimeter of permanganate containing .003162 grams of $KMnO_4$, multiplied by the factor .8783 gives the amount of glucose each cubic centimeter represents or .002777 grams of $C_6H_{12}O_6$. But glucose as generally found contains one molecule of water. Making correction for this, each cubic centimeter of $KMnO_4$ would represent .002916 of $C_6H_{12}O_6$, H_2O. This result multiplied by the contents of the flask, will give the amount of glucose in the sample, and the per cent. can be obtained by dividing this by the first weight, provided the sample is perfectly dry. The process was thoroughly tested with pure glucose and found quite accurate.

Twenty samples of sugar were examined, constituting nearly all the grades from a granulated to a molasses sugar. Part of them had been obtained directly from eastern refineries; the remainder from wholesale houses of New York, Boston, Baltimore and Detroit. The first five samples examined were granulated sugars. Only two contained glucose. One from a refinery in New York contained four-tenths of one per cent. The other from a wholesale house in New York had eight-tenths of one per cent. Of seven samples of A coffee sugar, six contained glucose; but only four large amounts. A Standard A from Detroit contained four and eight-tenths per cent. An off A from New York had eight and one-tenth per cent. An off A from Detroit had ten and four-tenths per cent., and a Standard A from a wholesale house in New York had eighteen and nine-tenths per cent. of glucose. The last sample had a granular appearance and sticky feel to the fingers. Four samples of Extra C sugar were also examined. Two were from refineries, one having five and three-tenths per cent.; the other five and six-tenths per cent. of glucose. Another sample from

Baltimore had four and one-tenth per cent., and one from New York had five and six-tenths per cent. of glucose.

Of the C sugars examined two were from Detroit and contained respectively eight per cent. and eight and one-tenth per cent of glucose. Another from New York had ten and four-tenths per cent. of glucose. The last sample was a crude molasses sugar from New Orleans. It contained two and three-tenths per cent. of glucose.

All sugars by long standing are liable to contain a small per cent. of glucose as it is easily produced from sucrose. Hence, the granulated sugars were pure. But the A coffee sugars which like the granulated sugars should consist almost entirely of crystallizable sugar, contained amounts of glucose it was impossible to account for. Four samples containing an average of ten and one half per cent. The Extra C. sugars only contained an average of five per cent., and the C sugars had an average of nine per cent. of glucose.

MILK-SICK OR SICK STOMACH.

BY JOHN L. CAMPBELL, M. D., WABASH CITY, OHIO.

The above name is what the people of certain districts of Illinois. Indiana, Ohio, and some other States call the disease, I am about to describe. To the technical practitioner the name would convey a very indefinite idea of the nature of the disease. It being confined to certain districts, and the eye of the medical profession having been directed to it only of late, accounts for it not being investigated as to its cause, pathology and treatment. I know of no text-book treating of it to any extent. I can only give my experience with it in my practice. The cause is undoubtedly a poison either a vegetable or mineral, (I think the first) and manifests itself first in animal life by water, vegetation and atmosphere. It certainly enters the human body by the ways I will mention, namely: (1) By drinking water out of certain old wells; (2) By eating the flesh of certain animals that pasture on vegetation in a neighborhood that is known to have poison; (3) By eating butter and drinking milk from cows that are infected with such poison.

People entertain an idea that drinking milk is one of the main causes, hence the name "Milk Sick." It possibly may be taken from the atmosphere and other ways. I never had occasion to hold an autopsy, consequently the pathology remains obscure with me.

Symptoms.—The premonitory symptoms are a general malaise, slight nausea, anorexia and constipation. Then in a few days these symptoms are intensified with great retching and vomiting, with inability to retain scarcely anything, obstinate constipation, distinct pulse on pit of stomach, in most cases slight fever. The fever may be very high, or absent altogether. The tongue is coated heavily with a white coat and yellow center. A very characteristic, offensive and disagreeable odor is given off, both in the breath and from the stools. When the patients are not disturbed, they say they are comfortable with only a "languid feeling." Sweating varies in different cases. In some it is profuse, in others wholly absent. The functions of most organs in the body are in a sluggish condition, especially is this true of the liver, stomach and bowels. The most prominent symptoms are the nausea and vomiting.

Duration.—The duration is variable and depends on treatment a great deal. It usually lasts from one to three weeks. Though often the duration is longer, or the disease may run into a cachexia, manifesting itself throughout the summer months.

Prognosis.—Is always to be considered as grave, but with efficient treatment may be made favorable.

Treatment.—The course I adopt mostly is eliminative and stimulating, and to combat special symptoms. For the nausea and irritable condition of stomach, I prescribe usually

℞.	Ipecac pulv	gr. 1-12.
	Morphia sulph	gr. 1-6.
	Bismuth sub. nit	gr. 8.
M.		

To be given every two, three or four hours as the case demands. And for local application, turpentine stupes answers the purpose well. These means will usually quiet the stomach so it will be able to retain medicine and a light diet. For the obstinate constipation I have found nothing that answers the purpose so well as the following:

℞.	Senna pulv.,	
	Jalap pul	āā gr. 10.
	Cloves pulv	gr. jij.
M.		

To be taken as often as may be necessary to keep the bowels in a laxative condition. As an eliminative, acetate of potash, iodide of potash, juniper, infusion of digitalis, etc., to depend on the case somewhat. For stimulation, brandy seems to be somewhat of a specific. In every case I have had of this ailment, brandy did not produce the slightest symptoms of intoxication, not so much as a trace of dizziness. I had one patient who drank one pint of good brandy, in the course of half an hour, and his word for it, it produced not the slightest intoxication. But just so soon as they begin to convalesce, then will the brandy produce its natural effect. I find this to be true in all cases that have come under my care. Different cases will vary in the amount of brandy required. I usually give from one-half to one ounce every hour to be diminished as convalesence ensues.

Where there is great pyrexia, quinine is beneficially given. The practitioner will be obliged to alter his course of treatment in many cases, as they are not all typical ones. The above is the description of the disease as I have found it.

Mercurials are of great service also in treating the disease.

REDUCTION OF DISLOCATION DOWNWARDS OF THE FEMUR AFTER THREE WEEKS STANDING.

REPORTED BY J. L. BLANCHARD, M. D., PARMA, MICHIGAN.

Mrs. H., age thirty-five, Jackson, Michigan: On May 10, 1881, Mrs. H. fell from a stool on which she was standing, resulting in a severe injury to the hip-joint. A physician was immediately called who pronounced it nothing more than a bruised condition, and said she would be better in a few days. On the 28th of May, as she was not improving, Dr. Bristol, of Parma, was called. On examination he found that limb to be fully two inches longer than its fellow, with other marked symptoms of a downward dislocation into thyroid foramen. Dr. Bucknum, of Parma, and Dr. North, of Jackson, were called in consultation and concurred in his diagnosis. They decided to attempt a reduction. Accordingly on the 29th, after etherization, the attempt was made and after two hours hard work was successful. The adhesions were very strong and required much force to break them up. This is one of the few cases in which reduction is accomplished after such a length of time, nineteen days. At the present writing the patient is doing nicely, and is able to bear considerable weight on the limb.

EDITORIAL BRIEFS.

The meeting of the Indiana Alumni of Michigan University held at Rome City, July 12, was attended by about fifty alumni. A permanent association was formed and annual meetings will be held.

The University of Michigan has recently honored some of the members of the medical profession. The degree of Doctor of Laws was conferred upon Professor Edmund Andrews, of the Chicago Medical College, and upon Professors A. B. Palmer and C. L. Ford, of the University. The degree M. D. was conferred upon Professor Taft, D. D. S.

The annual meeting of the Alumni of the Department of Medicine and Surgery of the University of Michigan, held June 29, was attended by about one hundred and thirty members. The President, Dr. Bartholomew, of Lansing not being present, Dr. Kapp, of Ann Arbor, was called to the chair, and Dr. Breakey appointed secretary. The President being absent, Professor Palmer was called upon for an address. After the election of officers, the society adjourned.

WHATEVER may be said of Cundurango Bliss, he has had the good sense to secure and retain the best surgical advisers. No one will question the fact that Drs. Hamilton and Agnew are not surpassed by any in the profession. Dr. Bliss also showed his good sense in dispensing with numerous local doctors who hoped to gain a little notoriety. The profession throughout the United States would have undoubtedly felt less anxiety had President Garfield's attending physician been a man known to the profession by his skill and learning rather than by his pretended cancer cures; but we must give Dr. Bliss credit for not relying on his own skill and for securing the best that the profession affords. What has been said of the ability of Drs. Hamilton and Agnew is equally true of the local advisers, Drs. Woodward and Barnes.

DR. BREAKEY'S LETTER.—With both sides of the Ann Arbor Board of Health controversy before us now, we cannot see that the Board did anything farther than its simple duty in refusing to give Mr. Smith permission to leave quarantine until his attending physician should inform the Board that Mr. Smith was not likely to infect others. The recommendation of cyanide of potassium as a disinfectant was made individually by a member of the Board—a homœopath—and was not sanctioned by the other members. As to the accusation that Dr. Smith, who is not a member of the Board, swore falsely about seeing the patient (Mr. Smith) at church, this remains for Dr. Smith to explain or bear as he choses. The whole story of the nurse and her pay as told by Dr. Breakey has nothing whatever to do with the case. It is a personal matter, which Mr. Smith might explain very differently. As to the trial of Mr. Smith, the Board prosecuted and Smith was acquitted. Dr. Breakey complains at the editorial accompanying Mr. Smith's letter. The managing editor is responsible for that editorial and here states that every word of it is true and can so be proven. If a member of any board of health recommends such a valuable (?) disinfectant as potassium cyanide, we have a right to call the attention of the profession to it. Who can tell how many lives such a valuable recommendation might be the means of—destroying. Neither is it the duty of an editor to run about after any man to ask if a certain article shall appear in the journal. Mr. Smith was responsible for his own article and we for the editorial. In lecturing on disinfectants, the speaker did call the attention of the class to the recommendation of a member of the Ann Arbor Board of Health. The secretary of the State Board of Health spoke for himself in our last number and without so much "twaddle" as we are compelled to give space to this time. As to THE PHYSICIAN AND SURGEON taking an interest in sanitary matters, we will let some of its articles on sanitary subjects, which have been copied all over the country, speak for themselves. With this we are done with this discussion. Both sides have had their say and enough dirt, our readers will doubtlessly think, has been thrown to require the use of cyanide of potassium or some other wonderful disinfectant.

FROM DR. OCTERLONY'S address to the graduating class of the Kentucky School of Medicine, we make the following abstract:

"I am no believer in luck, as the word is generally understood. Every event is the result of something that has gone before. Nothing happens by chance. We are all daily building up characters, and, in so doing, we are also constructing our future. The one depends upon the other. The men of luck are the men of brains. The lucky man is the man of industry, economy, and perseverance. The medical profession is not nearly as crowded as is every department of commercial life. We have plenty of room for men of talents. I have found that those who attend to their practice in the same systematic, energetic and intelligent way that good merchants attend to their business, are very likely to succeed.

"Merchants sometimes become suddenly rich by a single brilliant speculation, but physicians must generally be content, if they attain a respectable competency, by saving. This is a slow, but by far, the safer plan, and always to be preferred by one whose time and thoughts ought to be absorbed by scientific work.

"The remuneration of physicians is a question of importance, and often a vexatious one. It has troubled me; it will you. Common sense will help you to its satisfactory solution. That article comes nearer being a universal solvent than anything else I ever heard of.

"A great deal has been said of the wide-spread aversion among the people to pay physician's bills. I admit having met with some very aggravated cases of such moral obliquity; but stinginess is not the prevailing sin, and ardent gratitude, seeking material expression in prompt and liberal remuneration of the physician, has not been so rare as some would have us believe. The number of those who would pay, but can't, may be large; but I am happy to say that those who can pay, but won't ,form but a mean and meager minority.

"The majority of people do not understand the genuine interest and affection felt by physicians for their patients, nor their deep sympathy for suffering, which is ever finding expression in active efforts for the prevention and relief of pain and disease. About, with that fine insight which he so often displays, says, on this subject: 'There is no more glorious victory than to snatch from death its certain prey, and to create a being anew, whom disease had almost destroyed. Physicians know this pleasure; they attach themselves sincerely to those whom they have brought back from the other world, and have for them, all the affection of a creator for his work.' The brilliant Frenchman, however, did not realize that this sincere attachment of physicians for their patients is not reserved for those only who have been 'brought back by them from the other world.'

"In every true physician, there is an instinct that impels him to assuage suffering and cure disease. Throughout my whole career I have never met with a physician worthy of the name who would not promptly and kindly respond to a call for medical assistance, even to a personal enemy. Several such instances have come under my own observation, and I know of many others. Upon this, About again remarks: 'Physicians care for their patients as the Newfoundland dogs draw drowning men from the water. It is a matter of instinct. The dog blindly saves the enemy of his master. The physician attends his own enemy, as if he had an interest in saving him.'

"It is believed by many that we practice our profession solely for pecuniary gain; that we cultivate our science and strive for excellence in it, merely as a means to improve our financial condition. This is as unjust as it is untrue. A recent writer, who appreciates the enthusiasm that leads to noble exertions, thus speaks: 'The truth is, the best work, and a very large part of the work in every calling, is done, not from a mean and sordid hunger for its emoluments, whether of money, rank or fame, but from a sincere love for it, and pride in performing its duties well and creditably.' The moment a man begins to lose this *esprit du corps*—this high-minded professional pride—and to find his reward in his pay and not in his work, that moment his work begins to deteriorate, and he ceases to meet with the highest success.

"The physician's lot is, after all, a happy one. If he is not respected and beloved by those who know him, the fault is his own. I have always found that—

'Whether for good or ill,
The world is what we make it.'

"If the physician's work is hard, he enjoys his leisure with all the greater zest. If he is often separated from his family, he takes all the more pleasure in being with them when he can. If constant and heavy drafts are made upon his intellectual and emotional nature, he is also strengthened and blessed by receiving sympathy and affection equal to that he gives out.

"What matters it, if ingratitude sometimes is the only coin in which we are paid; our motives misconstrued; our best and noblest efforts belittled or entirely ignored.

"Every physician, I am sure, must, like myself, have met with true and generous men, affectionate and devoted women, among those he ministers to. Their confidence and faith in us is a perpetual inspiration; their friendship and affection strengthen and console us; their companionship sheds joy and sunshine on our path. Surely, it is worth our while to live and work and strive for their sakes. Gratitude fills my heart as I think of the many dear friends who have thus honored and blessed my life. Wherever they are, here or far away, to be seen again or parted from forever, may Heaven's choicest gifts be showered on them and theirs in abundant measure!

"The appreciation patients often have for their medical adviser and their dependence upon him is finely illustrated in the following lines, penned, perhaps, by some tender, suffering, womanly spirit. They were given to me by a dear old friend, whom it has been my privilege to attend for many years:

"TO A PHYSICIAN.

"O! watched for, longed for, through the heavy hours
Of pain and weakness, what a gift is thine!
What a proud science, Godlike and benign!
To pour on withering life sweet mercy's showers,
And on the drooping mind's exhausted powers
Like a revivifying sunbeam shine;
For thy next smile what sleepless eyelids pine!
What sinking hearts to which the summer flowers
Can breathe no joy! How many a day
I heard thy footsteps come and die away,
And clung unto that sound as if the earth,
With all its tones of melody and mirth,
To me had naught of interest—nothing worth
The brief, bright moments of thy kindly stay.

"In conclusion, gentlemen, let me say of the profession you have chosen: As a business, it will satisfy your reasonable desire for a respectable competency; as a science, it will tax your powers to their fullest extent, and confer happiness which can be found only in the prolonged and harmonious activity of all of our faculties. As a profession, it will afford you ample scope for the exercise of the most beneficient art and the most elevated philanthropy."

MEDICAL NEWS.

Dr. Carter (*Practitioner*) thinks that sarsaparilla is very valuable in syphilitic cachexia. It improves the general nutrition even when potassium iodide has failed to do much good.

Professor Colin, of Val-de-Grace, reports two soldiers bitten by the same dog on November 2, 1874. One of them was seized with hydrophobia on the forty-third day after, and the other on August 20, 1879, nearly five years after receiving the bite.

Dr. Taylor recommends (*Medical Herald*) phosphate of soda, thirty grains three times a day in case of recurring attacks of cramp colic. The dose should be diminished if it gives rise to intestinal irritation. It should be given half hour before meals in a glass of water.

Dr. Sanger recommends that the cord of the newly-born babe be ligated with carbolized silk and treated antiseptically in every respect like any wound. Especially does he think this necessary when the mother suffers from or is liable to suffer from puerperal fever.

Dr. Kidd, the so-called homœopath, who treated Beaconsfield in his last illness, states that he has requested the withdrawal of his name from the British Homœopathic Directory, and the Homœopathic Medical Directory, and also from the Medical Council of the Homœopathic Hospital.

Dr. Bernard (*Dublin Medical Journal*) forms a diagnosis of enteric fever in doubtful cases by the following observations: (1) A small dose of castor oil will produce a characteristic motion; (2) the antipyretic action of quinine is very marked in typhoid, but slight in tuberculous affections; (3) in children a gastro-intestinal catarrh with pyrexia may resemble typhoid fever, but powder of rhubarb and sulphate of potash relieve the former and thus enable one to distinguish it from typhoid.

Eczema of Anus and Genital Region.—Dr. Bulkley (*Medical Record*) first relieves the constipation with sulphur and bitartrate of potash equal parts, one or two teaspoonsful to be rubbed with water to a paste and taken at night. The dose is not pleasant but is effectual. For the deficient action of the kidney he uses:

℞.	Potassii acetatis..................................	ʒj.
	Tincturæ nucis vomicæ........................	ʒij.
	Infusi quassiæ....................................	℥iv.

M. Sig. A teaspoonful in water after meals.

For the intolerable itching the patient is to have a pan of water hotter than the hand will bear, sit upon the edge of a chair, and hold a soft silk hankerchief squeezed out of the water against the genitals and anus as long as can be borne. The application should be made two or three times at a sitting. Then rapidly dry the parts by pressing a large, soft napkin against it, but using no friction. Then wrap with lint smeared with:

℞.	Ungt. picis..	℥j.
	Zinci oxidi..	ʒij.
	Ungt. aq. rosæ....................................	℥iij.

M.

In eczema of the penis and scrotum the following lotion is recommenned:

℞.	Bismuthi subnitratis	ʒij.
	Acidi hydrocyanici dil	ʒj.
	Emulsionis anygdali	℥iv.
M.		

CORRESPONDENCE.

MICHIGAN STATE BOARD OF HEALTH.

Reported for THE PHYSICIAN AND SURGEON.

The regular meeting of this Board was held at Lansing, July 12, all the members being present as follows: Hon. LeRoy Parker, of Flint; Rev. D. C. Jacokes, of Pontiac; Henry F. Lyster, M. D., of Detroit; J. H. Kellogg, M. D., of Battle Creek; Arthur Hazlewood, M. D., of Grand Rapids; Jno. Avery, M. D., of Greenville; and Henry B. Baker, M. D., Secretary.

Hon. Le Roy Parker was elected president of the Board for the ensuing two years.

SMALL-POX.

Dr. Jacokes spoke of an immigrant tramp-burglar who came down with the small-pox while confined in the jail at Pontiac. He and another prisoner in the jail were removed to the temporary hospital. The prisoner stole the clothes of the immigrant, and, leaving his own, ran away. Some one then stole the prisoner's cast-off clothes and bedding after supposed disinfection, and by this means small-pox was communicated to more than sixteen persons. He also reported that a second immigrant brought small-pox near Pontiac, but the disease was restricted.

Dr. Kellog reported that an immigrant sick with small-pox had recently been put off a Michigan Central Railroad train at Battle Creek. He remained about the depot all day before it was discovered that he had small-pox. He was then removed to a tent-hospital.

Dr. Avery reported an out-break of small-pox apparently brought by an immigrant Dane, who was vaccinated and not sick himself, to a camp in Montcalm county. The immigrant slept with and gave the disease to a countryman, who was vaccinated before his arrival in this country, six years ago. The disease was light, the man not being confined to his bed at all, and finally he went to a family of five unvaccinated persons, all of whom had the disease lightly. There were other cases in the neighborhood coming from the same source. The immigrant probably brought the contagium in his clothing from some infected city or immigrant on the journey, as he said there was no small-pox on board the ship on which he came, though there were cases of diphtheria on board.

A communication was received from the American public health association asking the influence of this board to secure legislation making it a criminal offense for any person to communicate any communicable disease, such as small-pox, scarlet fever, or venereal diseases, and giving to boards of health and health officials the same power in the prevention and suppression of other diseases as they now possess in cases of small-pox.

The secretary presented a resolution of the American public health association, asking the Michigan board to use its influence to secure general vaccination.

THE CHICAGO SANITARY CONFERENCE.

By direction of the board, the secretary had attended the conference of delegates from local and state boards of health, held at Chicago, June 29, for the purpose of devising means for preventing the introduction of small-pox and other diseases by immigrants. As secretary of the conference, he had prepared an official report and sent it to the national board of health for publication in its bulletin.

The action of the sanitary conference to prevent the spread of small-pox was indorsed, and resolutions were adopted, requesting the national board of health to secure, if possible, the vaccination of immigrants before they land in this country; asking the attention of every local board of health in Michigan to the details of the plan adopted at the late Chicago conference; calling upon them to secure a careful inspection of all immigrants entering and remaining within their jurisdiction, and a prompt vaccination or revaccination with pure and fresh bovine virus of all persons not protected against small-pox; calling attention to the need of establishing a quarantine at Port Huron; also, asking the national board of health to aid in preventing the introduction of small-pox and other communicable diseases by immigrants landing at eastern ports.

Dr. Baker read resolutions of the Tennessee State board of health, indorsing the action of the Memphis board of health commending the inspection service of the national board of health as being very much more effective than local quarantines, with less detention and annoyance to commerce.

VACCINATION FOR VARIOUS DISEASES.

Dr. Lyster, committee on epidemics and other diseases, read a translation of two important papers recently published in France, on the causation of certain communicable diseases, which gave details of successful methods of making viruses which can be used in vaccination and are effective in preventing deaths from these diseases. He received the thanks of the board, and was requested to embody his remarks and so much of the translation as was essential, in a paper for publication.

Dr. Baker had paid some attention to the same subject in connection with diseases of animals, affecting the public health. He mentioned a paper by Professor Law, of Cornell university, suggesting that these protective viruses all seemed to be made in accordance with a general law, namely, by their cultivation in fluids with access of free oxygen, and this gives us great hope of soon being able to make protective vaccination for many of the most dangerous diseases in animals and mankind.

Dr. Baker reported the investigation of an outbreak of a new disease in England, traced to the eating of American hams. The cause of the disease proved to be a virus which was used to inoculate animals of various kinds and reproduced the same disease in them. From the accounts it seems probable that it is no more nor less than our hog cholera. The symptoms closely resemble in some respects the disease known last winter in this country as "winter cholera."

SANITARY ASSOCIATIONS.

Dr. Jacokes referred to the Pontiac Sanitary Association and the work it was doing for public health in that city.

Dr. Kellogg reported the formation of a sanitary association at Battle Creek as a fruit of the recent sanitary convention held there by this Board. Among the subjects brought before the association was that of impure water. He had examined a sample of water used at an eating-house, among the boarders at which there were seven cases of typhoid fever last year. It contained a large amount of organic matter. Also a sample containing organic matter and a large amount of chloride of sodium, used by a family in which there had been much illness.

The request of the sanitary convention at Battle Creek, that this board issue a circular on criminal abortion, was referred to Dr. Kellogg as special committee.

FUTURE PUBLICATIONS.

Drs. Lyster and Baker reported their revision of the document on the restriction and prevention of diphtheria, and different points were discussed, amended, the document adopted, thirty thousand copies will be printed, and the document stereotyped so that local boards of health may secure any number of copies at cost of paper and press-work.

Dr. Jacokes referred to the great lack of knowledge among those who ought to know, as to what constitutes thorough disinfection. He proposed to remedy this by the preparation of a circular on disinfection.

Drs. Baker and Kellogg were appointed a special committee to prepare a tract on disinfection, which shall give the best method adapted to each disease and to each article to be disinfected, and which shall call attention to the many useless substances now employed for such purposes.

The document heretofore issued on the treatment of the drowned being out of print, it was referred to a committee for revision, with a view to its republication.

Dr. Baker was instructed to prepare a paper on the best methods of constructing hospitals for communicable diseases, avoiding the use of the name "pest-house."

LEGISLATION UPON HEALTH.

Hon. Leroy Parker, committee on legislation, made a report relative to public health acts passed by the last legislature, giving the titles of forty-eight acts bearing directly or indirectly on public health subjects, mentioning the subject of each act. These acts give increased powers to local boards of health, additional appropriations to the state board of health, authorize the board of control of state swamp lands to appropriate lands to drain overflowed lands, etc.

The recommendation by Dr. Foster Pratt, of Kalamazoo, for the amendment of the law relative to reporting dangerous diseases, was referred to the committee on legislation.

Under the new appropriation made by the recent legislature, the board authorized the purchase of additional meteorological instruments for the use of the board's observers in different parts of the state.

WORK IN THE OFFICE.

The secretary read a report of work in the office, which included a statement of the number of health officers appointed for the present year beginning April 1, as follows: in townships, 797; villages, 107; cities, 32; total, 937. For the year ending April 1, there was appointed, for townships, 827; villages, 112; cities, 36; total, 975, a difference of 39. It is believed that more than 39 will be returned before the close of this year. The 975 health officers appointed for 1880 made annual reports to this Board as follows: of townships, 414; of villages, 55; of cities, 14. Clerks of local boards of health have sent annual reports for 1880, from townships, 501; from villages, 36; from cities, 7. The compilation of these annual reports is now in progress.

During the quarter the correspondence of the office has been materially increased. This was partly caused by the outbreaks of small-pox in the state, and by the prevalence in some places of diphtheria. In one northern township, where the health officer was not a physician, the local officers applied to this office for a physician to be sent to aid in stopping the spread of the disease; and by direction of the secretary of the state board, Dr. Hawxhurst, ex-health officer of West Bay City, went there at the expense of the township, and has reported that the outbreak has been stopped.

The usual number of complaints have been received of sickness caused by flooding rivers for the purpose of running logs in the northern part of the state. In answering these the secretary has used Mr. Parker's paper on the powers and duties of local boards of health.

EXAMINATION IN SANITARY SCIENCE.

The fee for examination in sanitary science was changed from $10 to $1, the latter sum being deemed sufficient to cover the actual expense. It was voted that applicants unable to be present at this meeting may be examined at the meeting of the Board, October 11, 1881. Applications to be made to the secretary at Lansing.

GLUCOSE SUGAR AND SYRUPS.

Several samples of sugar and syrup, manufactured at the Michigan grape sugar factory at Detroit, were presented to the board and partially examined.

NOTICES OF CONTAGIOUS DISEASES TO SCHOOLS.

The secretary presented samples of notices of contagious and infectious diseases sent by the health officers of Grand Rapids and Tecumseh to the superintendents of schools in those cities, and suggested that if the health officer of each city would send such notices to superintendents, it would be a very important public health measure.

PREVENTION OF BOILER EXPLOSIONS.

An account of an experimental boiler explosion, by D. T. Lawson, was presented. His view is that they can be prevented by such a construction of the boiler as will stop the too rapid increase of steam under suddenly reduced pressure as at starting the engine, or by the sudden introduction of cold water. Results thus far seem to demonstrate the correctness of his theory.

The secretary was directed to present hereafter at each meeting of the board a *resumé* of the action of other state boards of health.

After auditing bills and accounts, etc., the Board adjourned to meet October 11, 1881.

THE ANN ARBOR BOARD OF HEALTH.*

EDITOR OF THE PHYSICIAN AND SURGEON: I avail myself of your permission to occupy space in your columns to notice some statements in the June number of your journal, concerning the Board of Health of Ann Arbor.

Of the article signed C. A. Smith, it is only necessary to point attention to a few samples of the misstatements of which the whole is made up. It would be difficult to compress more misrepresentations in the same space.

Mr. Smith and his sympathizers talk as if the Board of Health was a body in continuous session—responsible for Mr. Smith's sickness, and all personal inconvenience to him growing out of it—with no other official or private duties, nothing to do but to look after him, even to interfering with or usurping the duties of an attending physician. In his first sentence, Mr. Smith says: "I was taken sick March 18th and sent for Dr. Herdman. He diagnosed my disease as small-pox, and reported it as required by law to the Board of Health." Now, Mr. Smith leaves his readers to understand that all that transpired "March 18th." Yet Dr. Herdman's *first* notice to the Board reporting the case as "suspected variola" was dated the 21st of March, and received by the president in the evening too late to visit the case that night, or to get other members of the Board there. Later in the evening, additional word coming to another member, that the physician had pronounced it small-pox, and that the inmates of the house were scattering, he directed the marshall to institute quarantine of the house until the Board could determine what further would be needed in the morning. The patient was seen on the 22nd, by members of the board and other physicians. The diagnosis still considered doubtful and quarantine continued. Mr. Smith and his roommate—the only inmates of the house—were informed that they would have to stay in quarantine until the case was decided, and that unless they refused to accept such notice, their word would be taken that they would comply with the requirements of the Board. Mr. Smith was ill in bed with considerable fever and the idea that he, a prospective doctor of medicine, would break quarantine, or that his friend would desert him was not thought of by the Board. Both recognized quarantine, the latter by remaining until permitted to go out, the former by repeatedly asking to go.

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*This paper was intended for the July number of THE PHYSICIAN AND SURGEON, but absence and a pressure of other work delayed its writing till too late for that issue.

Dr. Herdman was requested to notify the Board as early as he could determine satisfactorily on a diagnosis of the case. In the forenoon of the 24th of March, six days later than Smith says, Dr. H. still expressed doubt as to the character of the eruption, but in the afternoon reported it to the Board formally as "variola" the diagnosis being "concurred in by Drs. Palmer, Maclean and Dunster. Dr. Palmer after Mr. Smith ran away stated that it was a very doubtful case, and he was not at all satisfied that Mr. Smith had had small-pox. I have neither time nor space to expose and correct seriatim the items of Mr. Smith's composition, yet there is scarcely a whole sentence in the whole paper much nearer the truth than the first one.

So far as the Board of Health was concerned it was not material whether its members believed Mr. Smith had small-pox, or agreed with each other, or whether any one concurred with the attending physician; if he reported the case as required by the statutes, and the Board believed the case was dangerous to public health, it was clearly the duty of the Board—and about which there was no disagreement of its members—to establish quarantine.

The Board rely chiefly on information from attending physicians, to determine the need for, and duration of quarantine, or the other measures. This is not only just and courteous to the attending physician and his patient, but a responsiblity no one else can assume. A Board of Health, or a majority of its members, might, and often does consist of non-medical persons.

Mr. Smith says, "thinking I had the opinion of my physician and of the Board itself that I would expose no one, I gave the Board thirty-six hours notice, etc., and left the city." Mr. Smith could not truthfully think any such thing. On the 14th of April I visited Mr. Smith and read to him a letter from Dr. Herdman, dated April 14, written to me in reply to my inquiry of April 13, when in his opinion his patient could go out without endangering others. Dr. Herdman stated that in his opinion "a person with small-pox was in danger of infecting others until the close of the stage of desquamation," and might do so after that time—that "in Smith's case the desquamation is not ended nor will it be in all probability for a week, but when it has ended I can if you so desire report to you." Yet Mr. Smith says Dr. Herdman refused to give such writing.

Dr. Herdman testified in court that he intended to visit Smith on Monday, 18th of April, for the purpose of furnishing the information requested by the Board, but learned that his patient had cleared out on the 16th.

Apparently Mr. Smith thinks if he only gives thirty-six hours notice it is all right to violate law. If he was not quarantined why give any notice at all. At my visit on the 14th of April I told Mr. Smith that in all probability he could be released in a few days—Dr. Herdman having last seen him on the 12th—certainly within a week. This was the date of the visit of which Mr. Smith says "in this way the case stood, I must get a certificate or stay in forever!" Mr. Smith was informed that the Board would depend on information from the attending physician in deciding when quarantine could be raised.

It was unnecessary and impracticable for members of the Board to visit him daily.

Mr. Smith complains that "it took a whole week to get one small notice posted on the door." As the card, which was about eight or ten inches by twenty, was put up next day after the case was reported, Mr. Smith's capacity for telling the truth seems to be about one-seventh—though that is above the average for the whole article. Evidently he should have had *two* cards on the door or one as big as a circus poster.

Mr. Smith complains that he was not arrested sooner. So does the Board of Health. His attending physician, members of the city council and many other persons expressed the opinion before his return and after, that he ought to be arrested, and the Board thought it very strange that so much time should elapse between the complaint being made and the arrest. The Board with many other persons were also willing to concede that the legal management of Mr. Smith's prosecution was not a success.

Mr. Smith says "no cases of small-pox occurred from my visit or on my return." Does Mr. Smith know this to be true? He took the chances of exposing hundreds of persons on the cars or wherever he met them, and for all he knows the seeds of infection may have been carried a thousand miles, and persons may now be sick or dead from it. Does he know when and where he contracted his own sickness? Perhaps had boards of health everywhere required convalescents from infectious disease to remain in quarantine till all danger of infection was over, Mr. S. himself might have escaped it. A Lansing journal stated that, a patient with small-pox who had broken quarantine in Ann Arbor, was visiting on such a street, and had been in several business places in that city, and advised its readers to vaccinate. A Lansing physician stated that he had been called on to vaccinate a large number of persons on account of Smith's visit. Does Mr. Smith feel pleased at creating such excitement and fear in a community, even if he does not know that any one was made sick?

Mr. Smith professed to be very anxious to get out of quarantine to attend lectures, because he was on expense doing nothing. Yet, when he broke quarantine he did not go to lectures, though apparently he might have presumed on the protection of some of the faculty, but spent money traveling, visiting and employing lawyers. After his trial he came to the president of the Board and wanted the Board of Health to pay his nurse—a woman secured for him by his physician before the case was reported as small-pox. When the case was so reported and the provisional quarantine continued, and a messenger employed, Mr. Smith was asked about his means and ability to take care of himself, and stated that he could pay his nurse, and would take care of that. The nurse was informed that she was to looked to Mr. Smith for her pay, and she states that she talked with him twice about it, he agreeing with her to pay her. He recognized the nurse as his employee by discharging her when he had no fnrther need for her.

When reminded of his former statement of his ability, and that the Board had not employed a nurse, there being no reason why it should as a county charge, any more than in any other case of sickness, unless Mr. Smith was destitute; and as he was attending lectures and boarding, it was presumed he was not destitute. He then wanted to "give notice" (in this case not even "thirty-six hours") that he could not pay the nurse. And when informed that his "notice" neither obligated the Board of

Health nor relieved him of responsibility to pay his debts; he then offered to "pay for his meals and drop the whole matter if the Board would pay his nurse!" When pressed to know what he meant and what "matter" he had to "drop," he repeated that if the Board would pay his nurse he would pay for his meals (which he would need if he were well!) "and say no more about it!"

Mr. Smith was permitted to go and informed that he could "say" what he pleased. That was before the publication of Mr. Smith's article. He was evidently then willing to leave his "reputation and character" without defense—for a consideration. He apparently subsequently decided to "drop" his "say" of the "matter" into print. The amount of his nurse's bill which as well as the bill for her meals furnished by another lady—he now declines to pay, in all perhaps—about thirty or forty dollars—would seem to indicate the value which Mr. Smith puts on his "character." I have been informed that Mr. Smith was an employee in one of the State offices at Lansing, receiving good pay. Yet this county has been put to an expense of over one hundred and fifty dollars on his account. The Board of Health paving rent for a whole house and leaving him in his own room for which he paid no rent while in quarantine. This is the "persecuted" Mr. Smith.

The prosecuting attorney stated in court that had Mr. Smith been arrested for debt under the section imposing only a fine (the section under which the Board of Health wanted the complaint made) that he would surely be held; yet the attorney drew the complaint and tried him under a section which he stated required much more evidence, for instance to identify or produce persons whom Mr. Smith exposed, or to show that sickness resulted to prove the exposure! Mr. Smith might have exposed persons to disease who came down with it in San Francisco or New Orleans. What if boards of health were unable to quarantine yellow fever? It is only by the protection afforded by local boards of health that travel by railway can be safe from infection.

Though foreshadowing the failure of the complaint he had drawn, the prosecuting attorney declined to withdraw or amend it and try Smith under a section on which he could be convicted, simply because he did not wish to put the county to more expense for the trial of a man not responsible for the collection of a fine! Mr. Smith therefore has the proud satisfaction of having violated his own word, pofessional opinion, the advice of his physician and teacher. the law of the State whose benefactions he has received, and the directions of the constituted authorities of public health of this city, rather than remain a few days longer in quarantine (in comfortable quarters, with his books and every reasonable need provided) until his physician could truthfully give an opinion that his patient would not endanger the public. And he escapes just punishment for his offence on the ground of being an irresponsible man, and accepts such escape as an indication of character! Happy Smith. It is unnecessary to add that he is a freshman.

It is not strange that Mr. Smith feels the need of "defending his reputation." The strange part of it is that the "candid public" to which he appears is the scattered readers of a medical journal, who knows nothing of him or his case rather than the public among whom he lived and who knew something of him and of the Board of Health.

It will doubtless appear strange too, to readers outside of Ann Arbor, that a medical journal "devoted to medical and surgical science" should admit to its columns a purely *ex parte* statement of a purely local and non-professional matter, the silly falsity of which could have been learned in five minutes. And we justly complain of the finding of a verdict—editorial or public—upon the testimony of one interested party only. We are willing to believe that Smith imposed on the editor as well as upon the Board of Health, more than he could do in either case again.

There was a singular coincidence, noticed by those of Smith's classmates who read his paper, that it was a substantial and much of it literal repetition of a lecture (?) delivered as one of the course to students, few of whom knew anything of the matter, or of the members of the Board of Health of this city, yet correctly estimated the fairness and safety of the abusive attack on gentlemen not present to answer for themselves. The lecturer was not an editor of THE PHYSICIAN AND SURGEON. The question of which plagarized the other, we will leave to Mr. Smith and the lecturer to settle between them.

The effect of this personally or otherwise, in Ann Arbor, fortunately is small, yet the design is none the less culpable, and the tendency of what it has, is to add to the difficulties everywhere attending the enforcement of sanitary laws.

That the ignorat should oppose the maintainance of health laws that call for some sacrifice of personal interest, is not strange. When physicians and teachers of medicine give aid or comfort to those who violate sanitary regulations, it will not be strange if students follow their teaching. Those who commend Mr. Smith's course in this case, are on record now as heretofore as not only opposed to the Board of Health, but opposed to each other.

The statements that permission was given to remove infected goods from the house, conditional upon it being done at night and without any one knowing it, and that no disinfection was required are pronounced untrue by Dr. George, (who it is alleged gave the permission). The owner of the goods—a medical student—gave as a reason for wishing to remove them that they were not infected. A medical student who would ask or consent to handle infected goods without disinfection must be very ignorant or very reckless, and a not very creditable witness. The work of abating the vilest nuisances is made more difficult if not prevented, by the commendation of those who violate law. There is not an owner of a foul privy, or hog-pen, or slaughter-house, or dead horse, or unhealthy tenement who could not—and many do—oppose the same objections to action of the Board in requiring the abatement of nuisance, as those offered by Mr. Smith, namely, the interference with personal interest and convenience. His physician stated that the only reason Smith gave for wanting to get out was that "he was tired staying there!"

After this showing Mr. Smith's statements concerning the Board of Health of this city, as well as his foolish attempt to involve the secretary of the State Board of Health will pass for thin twaddle. His performances in writing about what he knows are astounding, but he surpasses himself when he tries to write what he knows nothing of and becomes simply amusing in his attempt to play martyr.

Lest any misunderstand, I wish to say that if the managers of THE PHYSICIAN AND SURGEON will guarantee space to discuss the matters alluded to by Smith outside his case (either work of the Board of Health for which I am responsible, or my relations to homœopathy in or out of the University—of which Smith knows no more than a baby—as well as the relations of the faculty of the college of medicine and surgery to homœopathy) until it is all gone through with; and the real authors will write over their own names (though I have given more time than I can afford to board of health and other medical missionary work); I will cheerfully take time to present some interesting facts not so familiar to all the readers of this journal as to those living in Ann Arbor.

In conclusion while I write for myself only, I am sure the Board of Health will be glad of the aid of THE PHYSICIAN AND SURGEON in trying to conserve the public health of this city. The secular press of the city, through its six papers, has without exception given the Board efficient support. We trust that it is not expecting too much that its one medical journal should be equally helpful. Assuming that it wishes to be accurate and just, when it has any more statements concerning myself personally or as a member of the Board of Health, of the truth of which it has not proof, I will if given opportunity—a not difficult thing, as I see some of its editors almost every day—willingly correct them before put in print, rather than be put to the trouble of doing so afterwards.

Thanking you, Mr. Editor, for the use of more space than I intended to take, I am Very truly yours,

W. F. BREAKEY.

ANN ARBOR, June 25, 1881.

TRANSLATIONS.

Translations from Russian Journals for THE PHYSICIAN AND SURGEON.
BY RALPH D'ARY, M. D., ROMEO, MICHIGAN.

SCRAPING OUT THE UTERUS.

Dr. L. Prohovnik advises to scrape the uterus with the sharp curette in four varieties of disease:

I. The use of the curette is indicated in cases of endometritis post partum, caused by the retention of shreds of the uterine contents. These remnants, in pregnancies having a normal termination, may generally be removed by the hand; but where, from pathological causes, the membranes have remained partly adherent to the uterine walls; or where in women with abdominal walls of unusual thickness, the shreds of membranes are attached to the fundus of the uterus; or, finally, where there exist contra-indications to narcosis—the curette should be used. In all these cases the curette will enable the operator to do much more thorough work than any kind of forceps, or other instruments. Where, however, the pregnancy terminates abnormally, by abortion, the case is different, so far as the use of the hand is concerned. The latter can be used only in exceptional cases. The difficulty lies in the necessity of enlarging the os; in the impossibility of grasping the uterus through the abdominal walls, in order to steady it; in the narrowness of the vagina, and finally, the impossibility, in some cases, to distinguish by the finger, the membranes of the ovum from the mucous lining of the uterus. In these cases again the curette is the most convenient and effective instrument.

II. The curette should be used in cases of common chronic endometritis and cervicitis, and the following three rules should be observed: (1) To remove as much as possible of the affected mucous membrane, and especially where it has degenerated; (2) to give rest to the organ, and (3) to promote the formation of a new mucous membrane.

The therapeutic means which are usually employed in these cases, such as injections, vaginal and uterine blood-letting, ointments, caustics, not only require a great deal of time, but are in most cases useless. The curette acts much more certainly and promptly. After the scraping the patient should remain in bed from eight to twelve days, and should then receive the proper local treatment.

III. Mucous and so-called fibrous polypi, when they protrude into the cervical canal, or beyond the external os, should be removed with scissors, the ligature, by twisting, etc. But when they are so small, or so situated that they cannot be removed in this way through the cervix, but yet cause continued hemorrhage, the cervix should be dilated and the curette made use of for their removal.

IV. In cases of endometritis following chronic metritis, all the complications, such as flexions, versions, inflammation of the surrounding tissues, etc., should be carefully treated, but especially should every effort be used to prevent enlargement and thickening of the uterus. Among the usual local means against this are resections, removals of wedge-shaped pieces, the employment of the actual cautery, strong acids or other caustics. In these cases also the curette may often, be used to advantage, with or without consequent application of caustics.

The removal by the curette, of shreds of membrane should be accomplished immediately upon their diagnosis.

In the three other varieties of disease, the time immediately after the termination of the menses is considered the most favorable for using the curette.

The patient should be anæsthetized, although the pain is comparatively slight, because palpation is rendered more easy and certain in consequence of the relaxation of the abdominal walls, and any sudden movement of the patient is guarded against. The cervix is dilated either by means of the dilators (Peaslee, Hegar, Fritsch) or operatively (Schrœder), or gradually by means of sponge tents, laminaria, etc. The scraping is accomplished by Simon's curette. If the fundus uteri is to be scraped, the curved fenestrated curette is used. The scraping should be done with a slow and even motion, and continued until the curette conveys the sensation of the muscular surface to the hand. The operation may be accomplished in one sitting or in several, and antiseptic precautions should be used before, during and after the operation. (Lotions of a two per cent. solution of carbolic acid, warm, or a three per cent. solution of salicylic acid with the addition of some alcohol).

The final cauterization of the uterus is not without its dangers, for the operator does not see the field of the operation, and may cause cicatricial adhesions or contractions at the inner os. The cervix, of course, offers greater facilities for thorough cauterization. After the operation, the patient should remain in bed a week or two, and after rising, abstain for some time, from marital intercourse or fatiguing household duties or work.

The operation of scraping is contra-indicated: in case of retained shreds of membrane—when the patient presents decided symptoms of septicæmia; in endometritis or adventitious growths—when the ovaries and uterine ligaments are inflamed or habitually disposed to inflammation; in chronic metritis—when there exist flexions which would prevent the evacuation of the secretions.

Scraping with the finger nail Dr. P. considers tiresome and rough, and it does not convey so certainly the sensation when the muscular tissue has been reached as the curette does.—*Vratch.*

CONVALLARIA MAJALIS IN CARDIAC NEUROSIS.

Professor Botkin's *Weekly Clinical Gazette* (Saint Petersburg, Russia), contains the following:

On February 3, 1881, at the ambulance of Professor Botkin, a woman applied for medical aid. She was thirty years old, of medium size, thin and anæmic. She complained of constant dyspnœa, palpitation and pain about the heart, radiating into the left arm, and down, along its internal aspect, into the fingers. Exacerbations of these symptoms took place several times a day, and sometimes in the night. She was unable to work and losing flesh; would sleep but little, and only in a sitting posture. Had suffered for ten months, although she had been constantly treated by physicians. The cause of her illness was unknown to her. Her thorax was normal, breathing superficial, 48. Radial pulse small, 116; whilst the carotids and aorta pulsate violently. Her hands tremble very much. Immediately below the left clavicle there is a very noticeable dullness which extends along the left parasternal line and which over the third rib merges completely into the absolute dullness of the cardiac region, the latter extending toward the right as far as the median line. The heart impulse is vigorous, and in the normal situation. The second heart sound is more pronounced. The respiratory murmur along the parasternal line is weak and short, but improves after deep breathing. On palpation of the abdomen the right kidney was discovered to be painful and moveable.

Professor Botkin pronounced the case one of neurosis of the cardiac apparatus, taking the form of angina pectoris, and which had already caused a change in the dimensions of the heart; thus its diameter was increased so as to reach the median line, and increase in the size of the left auricle, was indicated by the dullness along the left parasternal line. In consequence of the insufficient evacuation of these parts of the heart, there was abnormal blood-supply to the lungs and dyspnœa. The cardiac neurosis in this case is probably due to reflex influence from the abnormal situation of the right kidney, which not only was irritated itself but kept up an irritation of the adjacent organs.

The patient was ordered to apply clay poultices to the cardiac region, to take two or three warm baths a week, and to wear a special belt to retain the kidney in its proper position, Internally she received:

℞.	Camph. monbrom.	ʒj.
	Chloral hydrat.	ʒ ss.
	Pulv. acaciæ.	
	Sacch. albi.	āā ʒj.

F. Pill. No. 60. S. Two pills three times a day.

On the 10th there was no improvement. Examination showed only slight sensitiveness of one kidney. The patient was now given tinct, convallariæ majalis, ten drops four times a day. The baths and belt were continued.

On the 17th the patient reported that she obtained relief from the very first doses of the medicine, and now feels well. She can sleep in the recumbent position, has no more palpitation or dyspnœa. Pulse, 80–90; respiration 22. The parasternal dullness is less marked. Cardiac dullness now extends only as far as the left parasternal line. Pulsation of the aorta is still too violent, but less than before. Heart tones clear, with slight accentuation of the second sound. When breathing deeply there is vesicular murmur, though rather weak, along the parasternal line, where the dullness was. The right kidney is less sensitive.

The whole success in this case of rather complicated cardiac neurosis is evidently due to the tincture of convallaria, since the remedies previously employed had no effect.

We believe the relation of this case to have some practical value, since cardiac neuroses are frequently met with in practice, whilst we have hitherto had no certain and reliable remedy for its treatment.

Our usual cardiac remedies—digitalis and adonis vernalis—says Professor Botkin, in the vast majority of cases of cardiac neuroses have no effect whatever, whilst convallaria generally acts like a specific. But in these cases it should be used in form of an alcoholic tincture, not in infusion.

The *Vratch*, for June 16, also contains an article on "Convallaria maj." by Dr. Alfayef, military surgeon in the Caucasus. The plant grows plentifully there, in the mountains, and has a great reputation among the people as a remedy for intermittent fever. The doctor experimented systematically on thirty-eight typical cases of that fever, but with only indifferent success. The plant will therefore never rank among the remedies for this disease, but the experiments are very interesting from the fact that they throw a great deal of light on the mode of action, dose, etc., of this potent remedy, which we here reproduce in short.

According to popular precedent, the experiments were made with the flowers only, leaving it an open question whether the therapeutic effect of the root and stem is identical with that of the flower.

The alcoholic tincture was found to be the most convenient as well as the most potent form of the drug. The tincture used was of the strength of four ounces of the flowers to the pint of dilute alcohol. In its mode of action it is very peculiar; when twenty or thirty drop doses were given the pulse became slower and less compressible. No unpleasant effects were noticeable although the doses were finally increased to half a fluid ounce each dose. The results, of these experiments as concerning the pulse, in substance are expressed by Dr. A. as follows: In small doses (five to ten grains of the powdered flowers, is equal to twenty or thirty drops of the tincture), the remedy invigorates the pulse much more noticeably than in large doses, (one drachm of the powder, or one-half fluid ounce of the tincture).

Large doses seem to act simply as *regulators* of the pulse, no matter what was its preceding state. "As to the diurectic effects of the remedy, I have observed that while small doses had a well-marked influence in that direction, this influence was not increased from larger doses. For instance, the following case: Simultaneously with tertian intermittent—a patient was suffering with acute hydræmia, general dropsy, and stasis of blood in the lungs, the pulse being 120, weak. He was ordered to take tincture convallaria, twenty drops, twice a day. No other remedy was used. In five days his condition was much improved; the pulse became stronger, the breathing freer, the quantity of urine had increased fourfold; but the intermittent showed no symptoms of abatement, the paroxysm being even more severe than before. . . . . .

"I am therefore, inclined to think that the convallaria acts as a diuretic only as it *stimulates* the heart's action, and consequently increases lateral blood-pressure, being similar, in this respect, to digitalis. But its great advantage over digitalis is, that it is *quite harmless even in over doses.*

"I have also tried the convallaria (in small doses) in pneumonia, and once in a case of dropsy from fatty degeneration of the heart, and obtained a slowing of the pulse, and, in the latter case, an increase in the quantity of urine voided. I think it therefore likely that the convallaria may with advantage be substituted for digitalis, wherever the latter is indicated."

Translations from German Journals for THE PHYSICIAN AND SURGEON.

BY VICTOR C. VAUGHAN M. D.

A POLYPUS ON THE RIGHT TONSIL.

A man forty-three years of age, of strong build, presented the following history and symptoms, when examined in Professor Dumreicher's clinic: From childhood he had been troubled frequently with inflammation of the throat and dryness in the mouth and nose. When lying upon the back or left side, there was a tickling in the throat and a sense of suffocation. These symptoms were due to a polypus which had grown upon the hypertrophied right tonsil. The growth had a pedicle six millimeters long and four broad. It was removed with scissors and its microscopical structure shown to be that of the ordinary hypertrophied tonsil. It consisted of connective tissue and lengthened lymph follicles.

Looking up the history of this subject the following cases have been found: Julia reports a fibrous one with long pedicle; Schrötter reports a sarcoma going out from the left jaw as a polypus; Sidlo noticed a fibroma on the tonsil.

OVARIITIS.

Vedeler (*Norsk. Mag.*) states that the pathological anatomy differs greatly in parenchymatous and interstitial öophoritis, also in öophoritis and periöophoritis. But the recognition of these differences is of but little practical importance. V. also calls the diagnosis between congestion and inflammation of the ovary "a clinical finesse" without practical value. Out of three thousand six hundred cases of female disease, V. met with fifty of ovariitis. In seven cases (all of sterile women) the ovariitis was uncomplicated. In three it was accompanied by anomolies of the internal genitals.

Authors give the following causes of ovariitis: Masturbation, sexual excess, suppressio mensium, injuries, gonorrhœa, child-bed fever, exanthematic and rheumatic fever. In V.'s cases, only one was possibly due to masturbation. Four were due to straining from lifting. Eleven dated their trouble from child-bed sickness. In fifteen there had been marked traces of urethritis, and in eighteen the cause could not be detected.

That ovariitis may be due to gonorrhœa, there can be no doubt. V. thinks that the disease passes from the vagina through the uterus and tubes to the ovaries. Many consider ovariitis as a frequent complication of virulent blenorrhœa. Others hold that this complication but rarely exists. V. considers gonorrhœa the most frequent cause of ovariitis (thirty-eight per cent, of his cases being due to this cause), and it may have been the cause of many of the cases about which no satisfactory history could be obtained. The evidences of gonorrhœa in the external genitals disappear as soon as ovariitis sets in (as similarly happens in epididymitis).

In the eleven cases whose trouble dated from confinement, only the time of beginning and not the cause could be ascertained. In eight the pregnancy had been of normal duration, but the patients had been sick in child-bed, the nature of the sickness could not be ascertained. In three there had been abortion or premature birth. That child-bed fever may cause ovariitis has been proved by postmortem examination, when pus has been found in the ovaries. In the three cases of abortion, the previous existence of gonorrhœa was suspected and the gonorrhœa may have caused the abortions.

In one of the four who attributed the trouble to straining, examination showed that there had been gonorrhœa.

V. failed to find any case due to suppressio mensium, excessive coitus, exanthematic or rheumatic fever. It is known that exanthematic fever may cause acute endometritis which may extend through the tubes to the ovaries.

The symptoms of ovariitis may be very marked or difficult to distinguish. In most cases there is pain in the iliac region, but this is not a characteristic symptom. V. could not find a certain painful spot, nor was the darting pain down into the thigh found to be pathognomic.

With reference to diagnosis, V. holds that the normal ovary cannot be felt, while the inflamed one is enlarged and generally displaced. In acute inflammation the ovary is often as large as an apple; in chronic cases not larger than a walnut, often smaller. The surface is smooth, and the tumor somewhat elastic. Pain is produced by pressure. The ovary may be found close up by the side of the uterus or in the fossa Douglasii.

As to prognosis, life is seldom endangered. Sometimes abscesses of the ovaries may form and produce death, but this happens very rarely. The pain may be very great and in nervous persons may lead to hysteria.

For treatment, V. used in acute cases external applications of cold, leeches on the portio vaginalis, the administration of salines, quinine and laudanum, and rest in bed until all trace of pain has disappeared. In chronic cases the pain is seldom so severe as to need treatment only during menstruation. Coitus acts harmfully. At least, patients do better when removed from their homes and husbands. Internally potassium bromide and turpentine; externally turpentine may be used. Leeches may be applied in the exacerbations in chronic cases also. At night a vaginal suppository of two grams of cacao butter and 0.10 gram each of opium and extract of belladonna may be used with benefit.

TREATMENT OF ULCERS.

Dr. Fiebig (*Berl. klin. Wchnschr.*), treats gangrenous or unhealthy graulating ulcers as follows: He washes them well during the day by allowing carbolic acid water to fall upon them in a spray from a vessel suspended over the ulcer. At night the ulcer is covered with powdered iodoform; or an application of powdered iodoform and magnesia is made twice per day. After the ulcer has been thoroughly treated in this way and begins to show healthy granulations, it is covered with a thin plate of lead, such as is used in packing tea; the lead being held in position by a bandage. According to the amount of pus formed, the lead must be cleansed and a new bandage applied two or three times per day. Under this treatment the callous and torpid edges soon become soft and heal rapidly.

Professor Courtney (*Jour. de Ther.*), cleans the ulcer with a solution of salicylic acid, carbolic acid, soap, chloral or potassium permanganate. Then to stimulate he washes for a few minutes with wine, pure or after the addition of alcohol or with aromatic wine. These washings are made twice per day, and during the intervals a fenestrated compress with red precipitate salve is applied (one gram of the precipitate being mixed with from thirty to forty grams of lard). Over the compress is placed lint and this covered with a linen band, extending from the instep (in case of ulcers of the leg). Over this is placed a rubber bandage and a high stocking drawn over the whole. By this means an impermeable covering is secured, and the moisture and heat retained favor granulation and soften the torpid edges by resorption of their histological elements. For checking excessive granulation, (which is sometimes necessary) silver nitrate is used. As a sedative, the tincture of opium. An opium salve may be used in the place of the red precipitate.

DISEASE OF THE FIFTH CRANIAL NERVE.

Professor Gerhardt (*Archiv f. Klin. Med.*) reports the following cases:

(1) *Compression of the Carotid in facial Neuralgia.*—When a child, the patient was struck with a stone near the inner corner of the left eye. For three months he suffered from painful imflammation of the face and excessive lachrymation of the eye. When thirty-four or thirty-five years of age, the part again became paresthetic and painful. The whole of the left side of the face now became involved. This condition had existed fifteen years when the patient applied to Professor Gerhardt Pressure upon the left carotid wholly releived the pain. Soon afterwards the patient died with pneumonia. On postmortem examination the left gasserian ganglion was found surrounded by thick, highly vascular connective tissue. The dura here was hyperæmic and hæmorrhagic. Professor G. holds that the injury inflicted by the stone caused a lingering periostitis, which followed the involved branch of the nerve.

(2) *Galvanisation in trismus.*—A patient, affected with catarrh of the middle ear, had trismus to such an extent that for twelve days he could take only fluid food. The painful point was on the left side. Two applications of the constant current gave permanent relief. An aphonia existing at the same time was relieved by interlaryngeal faradisation.

A RARE DISEASE OF A FŒTUS.

Dr. Theilhaber (*Bayr. ärztl. Intell-Bl.*) reports the following: A woman twenty-five years of age, had one child which was born perfect and sound, but after four weeks died of some disease unknown to T. The woman again became pregnant and in the eight month gave birth to a living boy of two kilograms weight and thirty-nine centimeters long. The child had a large nævus to the left of the navel, about the distance of the breadth of two fingers. To the right of the navel was a round ulcer about the size of a mark piece, and pouring a greenish exudate. The placenta was fifteen centimeters long and thirteen broad, and weighed after removal of the blood four hundred and twenty-two grams. It contained many lumps about the size of peas. These were found by microscopical examination to consist of connective tissue enclosing many round cells. The decidua was much thickened and contained substances of the same microscopical structure as those of the placenta. For ten days after the birth of the child no treatment was instituted as it was not expected to live. After this calomel was given, the ulcer rapidly disappeared and the general health of the child improved. Dr. T. thinks this case syphilitic and that the mother contracted the disease soon after conception. Hyperplasia of the decidua has been noticed frequently as due to syphilis.

Translations from German Journals for THE PHYSICIAN AND SURGEON.

BY M. E. PAGELSON, GRAND HAVEN, MICHIGAN.

CHANGES IN THE BLOOD IN BURNS OF THE SKIN. (CONTINUED FROM PAGE 334).

I had to learn the method of procedure in the first case, and waited too long in order to decant as much as possible, so that some oxyhemoglobin was dissolved in standing from the second to the third day, and the quantity of dissolved oxyhemoglobin was therefore, found too high. The corpuscle solution contained 97.6 per cent, the serum solution 2.4 per cent. of the total amount of oxyhemoglobin in the blood. Although certainly too high an estimate, the loss of 2.4 per cent of the total quantity of blood corpuscles, is of no importance whatever for the health of a patient.

In the second case, using the blood from the left side of the heart, and also that removed soon after death, I succeded, after letting it stand over twenty-four hours, in decanting the sodium chloride serum solution perfectly clear up to the last drop. I was not so successful with the blood from the right side of the heart, since after twenty-four hours there occurred a coagulation in the mixture, which though very slight, prevented the formation of a deposit. From nine hundred cubic centimeters, one hundred cubic centimeters were decanted perfectly clear. The remaining eight hundred had to be diluted with four hundred to produce the same color, and the seventeen hundred cubic centimeters of corpuscle solution had to be diluted to 329,120 cubic centimeters to preserve the same color as that of the sodium chloride serum solution. The quantity of hemoglobin in the serum was in proportion to that in the corpucles, as 900: 329,520, hence 2.72 parts per thousand of the coloring matter of the blood had gone over to the plasma. In the left heart the hemoglobin in the serum was found to be 4.003, and in the blood removed soon after death, 5.028 parts per thousand.

The difference in the amount of coloring matter found in the serum of the blood from the right and that from the left ventricle was not caused by a mistake in the analysis. I am satisfied that the mistake in measuring the color is not so considerable. Probably, in taking the blood from the heart, the whole quantity of serum belonging to the coagula was not removed, as was quite possible under the circumstances. By infiltration into the walls of the vessels, perhaps also by transudation, another small part of the hemoglobin in the plasma or serum may have been lost, but excepting that portion passed over into the urine, the amount removed from the vessels is surely small. The blood taken a few hours after death from a vein is by all means the most reliable, although this again may contain too much serum. If we take this estimate as the basis of our computations and assume that five per thousand of the corpuscles of the blood have been lost, have been destroyed by the burning, then this in a total amount of five kilograms of blood will amount to twenty-five grams, a quantity so insignicant that we can say that even ten times as much can be removed by bleeding, from every healthy adult without the least harm.

The amount of urine passed from the time of the accident until death, was about three hundred cubic centimeters, of acid reaction. It contained, as shown by spectroscopic analysis, dissolved methemoglobin, no blood corpuscles. Carefully neutralized with soda and precipitated with a solution of sugar of lead, it gave a clear, yellow filtrate, free from oxyhemogobin, out of which urobilin was precipitated by basic acetate of lead.

In a very large number of cases in which I have examined urine containing the coloring matter of the blood, I have never found oxyhemoglobin in the fresh urine, but always only methemoglobin. Since now, in the process of putrefaction methemoglobin is changed back to hemoglobin, and this on being shaken with air is immediately changed into oxyhemoglobin, it is plain how urine, which has putrefied in the bladder or has remained a long time in a test-tube, can contain hemoglobin. By the kidneys, plainly, only methemoglobin is excreted and the name now in use, "hemoglobinuria" ought, therefore, perhaps be changed into "methemoglobinuria."

After the change of the methemoglobin, in the urine in the above case, into oxyhemoglobin, I compared the color of this with that of a pure solution of hemoglobin, kept since 1876 in a hermetically sealed tube and completely unchanged. However on greatly diluting it as well as without doing so, no serviceable estimate could be made because of the large amount of bile contained. The precipitate obtained from the urine by means of sugar of lead, when dissolved in water containing just enough carbonate of sodium, after filtering, displaced with calcic chloride as long as a precipitate was produced, then filtered and left standing with some putrefying fibrin, gave an oxyhemolobin solution which could be better estimated, but there was still a yellow urinary pigment mixed with it, which made a correct estimate impossible. The determination of albuminates by coagulating with acetic acid and weighing the washed and dried coagulum, only gave one part per thousand of these. The whole three hundred cubic centimeters of urine could then, at most, correspond to a loss from the of blood 0.3 gram of hemoglobin. With fourteen per cent. of hemoglobin in the blood, 0.3 gram of it would be found in 2.14 gram of blood. Further more, since in treating the urine as above with lead acetate, soda and calcic chloride, the precipitate of calcic carbonate did not contain bile pigments, and the quantity of urobilin was very inconsiderable, no indications of further decomposition of hemoglobin were found.

The microscopical examination of the blood corpuscles in both cases showed no essential changes in them. A portion of blood from the right side of the heart, in the second case, when shaken with air became arterial, and upon exhausting it, gave up a large quantity of oxygen. The experiment was not carried out quantitatively, but the result was beyond a doubt. As soon as a new case presents itself to my observation, I shall not neglect carefully to estimate the relation of the blood, and the hemoglobin to the ogygen taken up.—Hoppe-Seyler in *Zeitschrift f. physiol. chem.*

PARALYSIS OF THE SPHINCTER ANI AFTER CONFINEMENT CURED BY SUBCUTANEOUS INJECTIONS OF ERGOT.

Dr. Larger reports (*Bull. de Ther.*) the following:

A woman, whom the author had delivered with instruments without rupture, came to him a few months afterwards saying that since confinement, gas and fæces had passed without her control. Examination showed the perinæum intact and the anus closed, but the finger could be introduced into the rectum without the slightest resistance from the sphincter. Evidently there was paralysis of the sphincter from the pressure of the childs head during birth. After having tried rectal injections of cold water and suppositories containing ergotin, L. made subcutaneous injections of ergotin near the anus. These were followed by considerable pain and slight tenesmus of the bladder. On the same day there was some improvement noticable. For the first time the patient felt a desire to defecate, but did not feel the fæces when they passed. Two days later a second injection was made, the contents of the syringe being distributed to three places in order to render the pain as light as possible. The pain was very slight, the improvement marked. After the third injection the woman could partially, and after the fourth completely, control the escape of gas. After the fifth injection the recovery was complete. Neither abscesses nor induration were formed by the injections. For a subsequent disease the woman was treated with drastics.

L. used Bonjeau ergotin in a solution of one part to ten aq. laurocerasi, injecting each time one gram of the solution. The solution should be freshly prepared each time.

BOOK REVIEWS.

THE HYGIENE AND TREATMENT OF CATARRH. With forty Illustrations. By Thomas F. Rumbold, M. D. Cloth: pages, 456. Saint Louis: Geo. O. Rumbold & Co. 1881.

Anything of value on this subject should receive hearty support from the profession. This class of disease is too often relegated to the traveling quack or the advertising nostrum-vender. A catarrh remedy which has had a good sale and has recommendations from any number of lawyers and clergyman was found by the writer of this notice to be a solution of common salt. Our medical works do not say much about the treatment of catarrh and physicians avoid these cases. For this reason Dr. Rumbold's work is of especial value. It embodies the results of his experience for more than twenty years and shows great originality in the invention and application of therapeutic measures. Sprays are recommended and in children the nasal passages should be treated for several weeks at a time at least twice a year. No physician desiring to acquaint himself with the best means of treating this common trouble can afford to be without Dr. Rumbold's work.

A PRACTICAL TREATISE ON IMPOTENCE, STERILITY AND ALLIED DISORDERS OF MALE SEXUAL ORGANS. By Samuel W. Gross, A. M., M. D., Lecturer on Venereal and Genito-Urinary Diseases in the Jefferson Medical College of Philadelphia; Author of a Practical Treatise on Tumors Mammary Gland, etc. Cloth; pages, 170, with 16 illustrations. Philadelphia, Henry C. Lea's Son & Co., 1881. For sale by John Moore, Ann Arbor.

This is a valuable monograph and so far as we know there is no other extensive work, upon the subject. As the author states, in most cases of unfruitful marriage, the woman alone receives attention; while in truth the fault in one case out of every six is with the man.

Impotence may be atonic, psychical, symptomatic or organic. Out of one hundred and fifty-three cases of which the author has notes, one hundred and forty-nine were atonic, one was psychical, one was symptomatic, and two were organic.

Atonic impotence varies in degree and is classified as follows:

"(1) The erection is imperfect and of short duration, and ejaculation is frequently too precipitate, but sexual desire remains, and intercourse is possible, although incomplete.

"(2) The erection is either so feeble that intromission is impossible, or is entirely absent. As in the preceding form, desire is present.

"(3) In the last phase of affection, not only is there loss of power of erection, but desire is completely abolished."

Cases belonging to the first two of these classes are amenable to treatment, but those of the third class are difficult to deal with.

Under sterility, the subjects of azoospermism, aspermatism and misemission are discussed.

The work closes with chapters upon spermatorrhœa and prostatorrhœa. We cannot recommend the work too highly. Evidently the author has had large practical experience and has studied the literature of the subject thoroughly.

CERTAIN CONDITIONS OF NERVOUS DERANGEMENT: SOMNAMBULISM; HYPNOTISM; HYSTERIA; HYSTEROID AFFECTIONS; ETC. By William A. Hammond, M. D., Surgeon General United States Army (retired list); Professor of Diseases of the Mind and Nervous System in the Medical Department of the University of the City of New York, etc. Cloth; pages, 256. New York: G. P. Putnam's Sons, 1881.

This is an exceedingly interesting and valuable work. Its scope will be best indicated from the following table of contents: (1) Certain Conditions of Nervous Derangement; (2) Some phases of Hysteria; (3) Another phase of Hysteria—Fasting Girls; (4) The Hysteroid Affections—Catalepsy, Ecstacy and Hystero-Epilepsy; (5) Stigmatization; (6) Supernatural Cures; (7) Some of the Causes which lead to Sensorial Deception and Delusional Beleifs.

In somnambulism the author considers the spinal cord as awake while the brain, either as a whole or for the greater part, is in the condition of sleep. This view is supported by experiments made in several interesting cases. The connection of hysteria with New England Witchcraft, the Jerkers, Mr. Wesley's Ministrations, Shakerism, etc., is pointed out and discussed in an exceedingly interesting manner. Modern necromancy and spiritualism are explained as being due to forms of hysteria in the so-called mediums who unfortunately find credulous followers everywhere. No delusion is too absurd to find believers. Fasting girls are shown to be hysterical frauds, and some noted cases, with the methods by which the frauds have been detected, are detailed. Stigmatization is to be understood as referring to claims of the Catholic church that certain holy persons have been impressed with the marks of crucifixion as upon Jesus. The work closes with the discussion of Supernatural cures and sensorial deceptions.

It belongs to the medical profession to rid the world of superstition. Every one interested in this should read Dr. Hammond's book. Not only read it yourself, but recommend it to your lay friend. It teaches the fundamental truth that the phenomena of mind result from nervous activity.

SELECTED ABSTRACTS.

PATHOLOGY AND TREATMENT OF DIARRHŒA OF PHTHISIS.

Dr. Williams, of the Brompton Hospital for diseases of the chest, gives (*London Lancet*) three different kinds of diarrhœa in phthisis. These arise from the following causes: (1) from the acidity of the primæ viæ, (2) from intestinal ulceration, (3) from lardaceous disease of the intestines. In the first stage of phthisis the diarrhœa is due to the first mentioned cause. It arises from over-feeding, and is accompanied by a coated tongue, tenderness in the right hypochondrium and epigastrium, loaded urine, anorexia, flatulence, and frequent light-colored stools. The second, intestinal ulceration, is the most frequent cause of fatal diarrhœa in phthisis and prevails mostly in the third stage of the disease, ulcers are to be found occasionally in nearly the whole of the intestinal tract below the duodenum. They are frequently so extensive in the large intestine as to give it a worm-eaten appearance, and the intestine cannot be distinguished from that of tropical dysentery. But in the small intestine we are able to trace the early steps of the ulcerative process. The first stage consists of an inflammatory hyperplasia of the solitary and agminate glands, as shown by their prominence when the intestine is opened. The second stage consists either in their conversion into pustules by formation of matter, or by their undergoing caseation. Either phase is followed by the third stage, which is the evacuation of their contents, leaving behind ulcers with smooth floors and sharp, clear-cut edges. Up to this point the process is held by many authorities to be inflammatory, and not strictly tubercular. After a while, gray tubercle is detected in the floor of the ulcer, which in time undergoes caseation, causing extension vertical or lateral, of the original ulcer.

Clinical Symptoms.—When ulceration is proceeding on a large scale in the intestines the patient complains of thirst and anorexia, the pulse is quick, and there is generally great prostration; the tongue passes from furred through various stages: (1) it is red at the edges, and furred in the centre; then red all over and glazed; then red with a brown streak in the centre; and, lastly, aphtha appears on it. The diarrhœa is remarkable for its persistency; the motions, especially toward the end of life, are very frequent—sometimes twenty in the twenty-four hours, but this is not always the case, and there may be only three or four daily, the characteristic feature being their steady persistency. They may be checked by treatment, but directly this is omitted, and often in spite of its action, the symptom returns; the stools themselves are very loose and ochrey-colored, often tinged with blood, and toward the end of life contain small sloughs from the large intestine. They are exceedingly fetid, and the patient appears much exhausted after each action.

The aspect in these advanced cases is well-marked. Owing to the terrible emaciation the face is drawn, the malar bones appear prominent, a hectic spot is generally seen on each cheek, and the expression of the countenance is that of pain, and pain there generally is in the region of the ulceration, or else in the center of the abdomen. Tenderness is generally to be found if carefully sought for; this of course varies in different cases. The right iliac fossa is the common seat of it in many, and especially in early instances; but later on, it may be detected in the right lumbar, right hypochondriac, epigastric, left hypochondriac, left lumbar and left iliac regions, showing clearly that the whole of the colon and sigmoid flexure are involved as well as the cæcum and lower ileum. Often, too, the detection is rendered more easy by the bowel being distended by flatus. The sigmoid flexure is, in my experience, as often the seat of ulceration as the cæcum, and I have frequently detected this during life, and verified it after death. The wasting arising from the diarrhœa is much greater than in ordinary pulmonary phthisis, and a few days of its persistence will reduce a consumptive, who has previously been gaining flesh, by several pounds.

Treatment.—The treatment of the first form of diarrhœa need not detain us long, as it consists of simply correcting the dietary and ordering a few doses of alterative and purgative medicine, with some alkali to reduce the acidity. The second form—that arising from ulceration—requires very careful attention. The great point to be kept in view is the healing of the ulcers, and this can only be attained by shielding them from all irritable substances, and by promoting a healthy granulating action. The treatment, in fact, resolves itself into three sets of measures.

(1) Rest in bed and the administration of only such food as can be quickly and easily assimilated without causing much distension of the intestine or accumulation of flatus. Such are chicken-broth, beef and veal tea, milk gruel, blancmange, always combined with liquor pancreaticus, and prepared after the admirable method of Dr. Wm. Roberts of Manchester. Dr. Jagielski recommends koumiss specially in these cases.

(2) Warm applications to the abdomen in the form of linseed poultices, turpentine stupes or hot water fomentations, to

reduce the pain and promote a certain degree of derivation to the skin. If the pain be severe, I have found the application of a small blister over the area of tenderness on pressure, as recommended by Dr. J. E. Pollock, very advantageous. I have noticed in some obstinate cases that when the blister has risen, the diarrhœa has been considerably reduced, and pain existing in the abdomen at the time has subsided.

(3) Internal medicines: When we have reason to believe that the ulceration is slight and confined to the small intestine, the diarrhœa may be treated by bismuth and opium, or by some astringents. The liquor bismuthi et ammoniæ citratis (B. P.) is a convenient form, but not always so effective as the powdered carbonate or the nitrate of bismuth in ten or twenty grain doses. Dover's powder combined with it in ten grain doses is often effective. The most powerful astringent is the sulphate of copper in a quarter to half-grain doses combined with half-grain to a grain of solid opium. Of the various vegetable astringents I have found tannic acid in four grain doses to answer best, far better than rhatany and catechu, but in all cases I combine it with a certain amount of opium to reduce the irritability of the ulcers. Indian bael, especially a preparation of the fresh fruit, is often efficacious in checking the diarrhœa if the ulceration be limited. If, however, the ulceration attack the large intestine as well as the small, it is obvious that more local treatment is advisable, and recourse should be had to injections or suppositories. The enema opii (B. P.) administered twice a day is sometimes sufficient, and may be strengthened by the addition of acetate of lead, four grains to an injection, or of tannic acid, five grains. This is a small injection, and it is doubtful how far its local effect reaches. Where the ulceration is very extensive, and involves the greater part of the large intestine, an attempt ought to be made to apply the remedies more thoroughly to the mucous membrane; and for this purpose injections of larger amount—from a pint to a pint and a half—may be used, consisting of gruel or of starch, or, best of all, of linseed-tea, and all containing a certain quantity of opium (thirty to forty minims of the tincture). I would specially recommend the linseed-tea, as it appears to exercise the same beneficial effect on the ulcers of the large intestine as it does in follicular ulceration of the throat. One of the most obstinate cases of intestinal tubercular ulceration I ever witnessed yielded to linseed-tea injections, after almost every other treatment had been vainly tried, the ulcers apparently healing, the diarrhœa ceasing, and the patient living for two years afterwards, and dying of pulmonary lesions. In cases where the stools are very fetid, I have added glycerine and carbolic acid to the injection with advantage. In many cases, however, it is desirable to give the large intestine as much rest as possible, and not to stretch the ulcerated mucous membrane

through any distension by fluids; in these cases suppositories of morphia (from half a grain to a grain), or of the compound lead one, or of those of tannic acid are indicated, and the treatment of the diarrhœa arising from lardaceous degeneration of the intestine is not very hopeful. Where the very channels of assimilation—namely, the villi—have undergone degeneration, as well as the various structures from which the succus entericus is poured out, it is difficult to see how treatment can restore the lost tissues. Dr. Dickinson's researches show that the loss of alkali is the chief characteristic of the disease. Dr. Marcet's analyses show that the chief chemical feature is deficiency of phosphoric acid and potash, and excess of soda and chlorine, and on this principle we should give phosphates of potash. When, however, the disease has so far advanced as to reach the intestine, it may be considered beyond any effective general treatment. We must be content to restrain the diarrhœa if we can by astringents, the more powerful the better. Tannic acid in from two to four grain doses, with dilute sulphuric acid, sulphate of copper or sulphate of zinc are the most useful, and injections of these substances do some good.

SELECTED FORMULÆ.

FOR DIARRHŒA OF INFANTS.

℞.	Bismuthi subcarbonatis	gr. xx.
	Cretæ præparatæ	ʒj.
	Spiritus lavandulæ comp	fʒij.
	Tincturæ opii	♏vj.
	Tincturæ kino	♏xxiv.
	Acaciæ pulveris	ʒj.
	Aquæ	f℥vj.
	Syrupi	f℥ij.

M. S. A teaspoonful every hour, or three or four hours, for a child of one year.—*Dunglison.*

DIURETIC.

℞.	Potassii acetatis	ʒiij.
	Aceti Scillæ	fʒij.
	Decocti scoparii (Br.) ad	f℥viij.

M. S. From one to two tablespoonfuls in a tumbler of water at 10 A. M., 3 P. M. and on going to bed.

℞.	Infusi digitalis	f℥j.
	Sp. ætheris nitrosi	fʒiv.
	Decocti scoparii (Br) ad	f℥viij.

M. S. To be taken as the preceding.

ENEMATA.

℞.	Magnesii sulphatis	℥j.
	Tincturæ asafœtidæ	fʒiv.
	Mucilaginis amylacei	f℥xij.

M.

℞.	Tincturæ opii	fʒss.
	Mucilaginis amylacei	f℥iv.

M.

GOOD IN CYSTITIS.

℞.	Infusi buchu	Oj.
	Balsam copaibæ	fʒj.
	Sodii bicarbonatis	gr. xx.

M. S. The whole quantity to be taken within twenty-four hours.

FOR SPRAY APPLICATION IN CATARRH.

℞.	Acidi carbolici	gr. ¼.
	Glycerini	fʒij.
	Aquæ	f℥ij.

M.

—*Rumbold.*

℞.	Pini Canadensis	gr. xv.
	Glycerini	℥ss.
	Acidi carbolici	gr. ss.
	Aquæ ferventis	℥jss.

M.

MACKENZIE SPRAY INHALATIONS IN DISEASES OF THROAT.

(*a*) *ASTRINGENT.*

Acidi tanici	(gr. iij ad ℥j).
Ferri perchloridi	(gr. iij ad ℥j).
Zinci chloridi	(gr. ij ad ℥j).

(*b*) *SEDATIVE.*

Potassii bromidi	(gr. xx. ad ℥j).

(*c*) *HÆMOSTATIC.*

Acidi tanici	(gr. x ad ℥j).

(*d*) *ANTISEPTIC.*

Acidi carbolici	(gr. iij ad ℥j).
Acidi lactici medicinalis	(♏xx ad ℥j).

EMPLOYMENT OF ENEMATA INSTEAD OF PURGATIVES FOR THE RELIEF OF CONSTIPATION IN ENTERIC FEVER.

Mr. Allen (*London Lancet*) discusses the above subject in a concise manner and we give his article in full as follows:

OBJECTIONS TO PURGATIVES.

Objection I—*Purgatives may irritate the stomach.*—In enteric fever, as in most febrile disorders, the stomach is easily irritated and upset. It is therefore a matter of great consequence to spare the stomach any needless disturbance, so as to preserve it in the best possible condition for the performance of its function—namely, digestion. Stomachal digestion is of special importance in enteric fever, where we wish to spare the intestines as much work as possible. Again, it must be borne in mind that even mild purgatives, such as castor oil, may induce nausea and vomiting, and the latter, as we are aware, may be attended with the possible danger of intestinal perforation in the advanced stages of the disease.

Objection II—*Danger of inducing troublesome and exhausting diarrhœa.*—I am satisfied that the indiscreet use of purgatives in enteric fever may give rise to severe and injurious diarrhœa, which may rapidly exhaust the patient, partly by the loss of fluid, and partly by the fatigue of frequently going to stool. It would appear that in some cases of enteric fever a purgative may give rise to sudden and startling prostration.

OBJECTION III—*Danger of inducing hemorrhage.*—It cannot be overlooked that if we give purgatives which will throw the ulcerated small intestine into violent action, by so doing we run considerable risk of starting intestinal hemorrhage. When we call to mind the condition of Peyer's patches in the advanced stages of the disease, it will be apparent that this danger is not a chimerical one.

OBJECTION IV—*Danger of causing intestinal perforation.*—The reality of this danger will also become evident to anyone who reflects on the fact that the bowel may become so thinned by ulceration as to give way readily under the influence of anything approaching to violent action. It is perhaps unnecessary to point out that intestinal perforation attended by passage of fæcal matter into the peritoneal cavity practically means death for the patient. Now, when we reflect that this irritation of the stomach and small intestines is not only useless, but dangerous when we reflect further that this annoyance and risk are incurred in order to cause the evacuation of the rectum, and when we remember that the rectum can be at once relieved without this objectionable roundabout method, it seems to me that enough has been said to condemn the use of purgatives for the relief of constipation in enteric fever.

ADVANTAGES OF ENEMATA.

I—*The enema accomplishes all that you want—namely, the evacuation of the rectum.*—It is in the rectum that we find the hardened fæces which give the poor patient so much misery and distress. The accumulation of hardened fæces in the rectum is a fertile source of mischief and suffering to the enteric patient. If he is afflicted with hemorrhoids the passage of such a motion gives rise to agony, and it may be loss of blood. The better plan is to avoid this mischievous state of matters; but when the evil has occurred, the quickest and most effectual means of relief is the administration of a copious enema of warm water and soap, with the addition, perhaps, of olive or castor oil.

II—*The relief is practically immediate.*—This is a matter of great importance. You wish to get rid of the source of irritation at once.

III—*The relief is obtained without any disturbance of the higher portions of the alimentary tract, as a rule.*—In conclusion, I do not mean to say that the use of mild, or it may be severe, purgatives in the treatment of enteric fever must necessarily be followed by fatal results, or even alarming symptoms; but I do mean to say that the practice is fraught with danger, especially in the advanced stages of the disease; and I contend that by the employment of enemata we attain our object without subjecting our patient to unnecessary suffering and danger.

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ORIGINAL ARTICLES.

ON THE NATURE AND TREATMENT OF ACUTE DYSENTERY.*

BY JOHN A. OCTERLONY. A. M., M. D., OF KENTUCKY,
Professor of Principles and Practice of Medicine, in the Kentucky School of Medicine.

To one studying the literature of dysentery it becomes very soon apparent that in regard to its pathology and genesis there is nothing like unanimity of opinion. Indeed, so great confusion has prevailed that the question has been asked whether different epidemics are characterized by distinct local lesions, and whether different diseases have not been confounded under the one name of dysentery; or whether the various local lesions, described by different writers, are only so many types of the same morbid process, modified, in particular cases, by constitutional peculiarities or other circumstances. It may not be possible for me to bring order out of this chaos and reconcile the various discordant views, I will, therefore, in fulfilling the task imposed upon me, endeavor simply to speak of the disease as it has presented itself to my own observation.

From a clinical point of view, dysentery may be regarded as an acute febrile disease, consisting in an inflammation of the mucous membrane, and sometimes, even the deeper structures, of the large intestine, and characterized by tormina, tenesmus, and small, frequent discharges composed of mucus, blood and scybala. This definition ignores a "specific" element claimed by Maclean, Aitken, Thomas and other writers, to enter into the nature of dysentery. The occasional occurrence of dysentery in epidemic form, the assumption that it is infectious or contagious, and finally, the presence of bacteria in the dysenteric discharges, constitute, I believe, the chief arguments brought forward to establish the theory that it is a *specific* disease. It is, however, not necessary to assume the existence of a peculiar diseased germ in order to explain the outbreak of epidemics of dysentery. These may, as I am convinced they do, depend upon atmospheric, telluric or dietetic conditions entirely independent of any specific poison. It is but natural that persons surrounded by similar hygienic circumstances should suffer in the same way. Cold, exposure, insufficient food of bad quality and badly prepared, are agencies sufficiently powerful to develop disease simultaneously in great numbers of people as well as in individuals. The contagiousness or infectiousness of dysentery is a question intimately connected with its specific nature, upon which great difference of opinion and much discussion have occurred. Even at the present time professional opinion as to it is divided. It has been said that the contagiousness of the disease is in proportion to its severity (Jaccoud), that mild dysentery is non-contagious, that in severe cases it becomes contagious in proportion to the violence of the attack. This is certainly not according to what is observed in other diseases whose contagious nature has been thoroughly established. Smallpox, for instance, even in the form modified by vaccination, no matter how light the case, may be communicated in the most violent type of the disease to another person. The same is true of other infectious diseases. On reviewing my own experience, extending over a period of over twenty years, and having carefully analyzed my recorded cases, I am confident that I have never met with any clinical evidence in favor of the contagiousness of dysentery. The disease has been quite prevalent sometimes where I resided, but it never appeared to spread from man to man. A rather extensive experience with this disease both in the field and in hospitals, during the late civil war, and during an almost continuous hospital service since the close of the war, up to the present time have given me the same results. It has never happened that when a patient with acute dysentery has been admitted to my ward other patients in the ward would shortly afterward become attacked by the same disease. But it has been the almost invariable rule, that when one patient in the ward took smallpox, a succession of smallpox cases would soon after develop in the same ward.

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*A paper read by request at the meeting of the American Medical Association, Richmond, Virginia, 1881.

Lebert, now about thirty years ago, if not more, detected the presence of bacteria in the discharges of dysenteric patients, and these organisms were at once regarded as the exciting cause of the disease, and the efficient means of propagating it.

I have convinced myself that bacteria are *not* always present in the evacuations of dysenteric patients. It appears, therefore, more probable that here, as well as in some other diseases, during which bacteria have been found in the excreta, these organisms are an effect and not a cause of the disease with which they are associated, or that their presence is simply accidental.

Malaria has been regarded as a cause of dysentery, as well as of many other acute affections, and authors describe a "*malarial variety*" of the disease. If malaria really induces dysentery so that this rather is a manifestation of malarial intoxication as are ague and remittent fever, then it ought to be controlled by a purely anti-periodic course of treatment, just as they are. But my observation teaches me that the course of dysentery is not influenced by such a plan of treatment to that degree which we would expect if it were a malarial disease. It is undoubtedly true that malaria may complicate this as other diseases, and that under such circumstances quinia will not only prove beneficial but be indispensable. Dysentery certainly prevails in regions perfectly free from malaria. The influence of this poison as a *predisposing cause*, by impoverishing the blood and reducing the strength of the individual cannot be denied, and has been properly appreciated by *Woodward* in his excellent book on "Camp Diseases."

A scorbutic form of dysentery has also been described, but scorbutus is much more rare than this disease of which it is supposed to be a cause. They both arise in overcrowded confined localities, among persons badly and insufficiently fed. It is true, scorbutus may, like malaria, act as a predisposing cause of dysentery, but more frequently the two are merely associated together in the same person, both depending upon a common cause—defective dietetic conditions.

Some stress has been laid by Professor Flint upon the fact that his cases of dysentery had all occurred during July, August, September and October, as tending to show that the disease is due to some organic poison. I have the highest esteem for Professor Flint and for his views, but it appears to me that his cases, being only forty-four, are too few in number to safely base any generalization upon. Cases of acute dysentery may certainly occur even in winter, though it is admitted that the disease is more frequent during the heated term, and that it prevails more frequently, as well as with greater severity, in tropical than in temperate regions.

Niemeyer, Habershon and others have made a distinction between *catarrhal* and *epidemic* dysentery, regarding the former as non-contagious, and claiming that the latter is contagious, but they fail entirely to point out any clinical difference between the two forms and indeed describe exactly the same symptoms as characteristic of both.

To sum up: Dysentery has always presented itself to my observation as a local inflammatory disease, the fever being secondary and symptomatic, and commensurate in severity with the extent of intestinal mucous membrane involved, and with the gravity of the local inflammatory changes. In light cases the fever may be almost *nil*, but in epidemic dysentery it is high.

The causes of dysentery are analogous to those which produce inflammation in other organs. Whether direct or indirect, they are irritants, and the severity of the intestinal inflammation is the exact measure of the degree of irritation to which the mucous membrane has been subjected. It would merely extend the length of this paper were I to enumerate the various causes of this disease, I shall, therefore, at once proceed to the second part of my subject.

THE TREATMENT OF DYSENTERY.

In order to reach comprehensive and correct views as to the treatment of any disease, it is necessary to be acquainted with its natural history; to know what are its duration, course and termination when uninfluenced by remedies, and left entirely to itself. Yet in this knowledge, so essential to a just estimate of the direction in which our medicines have influenced the disease and the degree to which this influence has been exerted, we are sadly wanting. The duration of acute dysentery varies from four days to four weeks. Many years ago I studied the natural progress of a rather severe dysentery in my own person. It lasted fourteen days and was entirely uninfluenced by medicines. During the greater part of this time I took no food except flaxseed tea acidulated with lemon, and slightly sweetened with sugar. At the end of the time mentioned, convalescence was fully established, but I remained quite weak for some time. From this and many other cases, I conclude that in dysentery the tendency as a general rule is to recovery. In the epidemic form of the disease such vast differences have been found to exist between different epidemics that no general rule can be laid down, except that the tendency to recovery is less marked than in the ordinary dysentery we encounter, and that the duration and subsequent debility are much greater. In forming an estimate of any given plan of treatment, it is then necessary not only to ascertain the percentage of recoveries it will give, but also the duration of the disease under its use, and to compare it with the natural course when uninfluenced by any medication whatsoever.

The first indication in the treatment of dysentery is *to place the diseased bowel in a condition favorable to cure:* This is best accomplished, first, by emptying it thoroughly; and probably no other drug answers this purpose so well as a full dose of castor oil. In the second place, the diseased bowel must be kept quiet—have rest—to obtain this the patient should be kept in the recumbent posture, which ought not to be changed, even when the bowels act. He should be urged to resist, as much as possible, the desire to strain, and when an evacuation is unavoidable the *bed pan* should always be used. In the third place the diet should be bland and nutritious, and of such quality that no residue shall remain to pass into and irritate the inflamed bowel. Fourthly, demulcents, such as barley slime, flaxseed tea, etc., which furnish mechanical protection to, and separate the inflamed surfaces are found to be decidedly useful, and, therefore, are to be recommended.

The second indication is *to control the morbid process, either by removing its cause or by the exhibition of remedies having a direct action upon the inflammation.* To fulfill this indication, quinia or antiscorbutics should be administered when a malarial or scorbutic taint is recognized, whatever may be the physician's views as to their exact relations to the dysenteric disease. There are several remedies regarded as exerting a specific influence upon the inflammation. First among them is ipecacuanha. Its use, in large doses, on an empty stomach guarded by a previously administered dose of opium has been advocated by Maclean, of the British army, and some years later in an able paper by Dr. D. W. Yandell, of Kentucky. When given in this way in doses of twenty, thirty, or even more grains the object is to obtain its evacuant, and specific action upon the bowel, and not the emetic effect, which precautions are taken to prevent. That this mode of administering ipecacuanha is followed by marked improvement and speedily curative effects, I have myself often witnessed. Yet there are certain objections to it. The bulkiness of the dose, and the impossibility, in many cases, of preventing its emetic effects are the most important ones. It will probably never be a generally adopted plan in private practice, and it is in the majority of the cases we are called to treat, entirely unnecessary to resort to it, when less heroic and more pleasant remedies are at our command. The bark of the root of Calotrapis Gigantea or Mudar has been of late years employed in India, its mode of action is said to be like ipecacuanha, for which it has been found to be an excellent substitute. The dose is from twenty grains to one drachm. Pain, tenesmus and irritation are rapidly allayed by it. I have no personal experience in its use. The saline plan is essentially the same in principle as the preceding. The aim being to drain the congested vessels of the bowel, and in that way to put a stop to the inflammatory process, and at the same time to remove and keep the bowel clear of all irritating contents. In combination with opiates it has certainly been found to work exceedingly well in the hands of many practitioners in this country. Of late years ergot has come in vogue on account of its known power to diminish the calibre of blood-vessels and in that way to control congestion.

It has been found more useful in chronic than in acute dysentery, but my friend and former pupil, Dr. G. W. Baylor, of Milltown, Indiana, reports excellent results obtained with it by him, during a recent epidemic prevailing in his county.

During 1878, I began to use the Bolivian remedy, *coto bark*, in the treatment of diarrhœa and dysentery. It is said to be regarded by the natives of Bolivia as a specific in these diseases. I have frequently prescribed it in acute dysentery with considerable benefit. It may be administered either in the form of a fluid extract, or decoction. The latter is the better preparation, at least, I have found it more suitable in acute dysentery. When given in doses of one-half ounce to an ounce every two or three hours, it lessens the griping pains and the frequency of the discharges, and the straining that accompanies them. If required, opium or bismuth may be combined with the coto whose efficacy is enhanced by this addition, but even when given by itself it is often of signal benefit.

To relieve prominent symptoms is an indication of great importance and, indeed, where specific medication is not undertaken or practicable, our treatment is restricted to endeavors toward its fulfillment. Pain, is perhaps, the symptom that most imperatively demands relief. It would be unnecessary and out of place here to mention such applications as the good old-fashioned laudanum and starch enema, etc. However, opium in some form is almost always needed. It is difficult to understand Trousseau's great objection to its use in dysentery. In the form of Tully's powder, or the opium and camphor pill, it has served me exceedingly well. Hypodermic injections of morphia are not so efficacious in this disease as the mode of administration by which the anodyne is brought *at once* in immediate contact with the mucous membrane of either the stomach or lower bowel. The tormina are greatly relieved by the application of hot fomentations and none other serves this purpose so well as a large and carefully prepared flaxseed poultice. Turpentine, either pure and sprinkled upon the poultice, or equal parts of turpentine and melted lard spread freely over it, increase the efficacy of the poultice. When turpentine stupes are used it is better to weaken the turpentine with an equal quantity of lard, than to use it pure or weakened with hot water. Cold applications are favored by some who nevertheless have given no rule by which their applicability in a given case may be determined. The frequency of the evacuations is a symptom so distressing as to require special attention in almost every case. The patient should be encouraged to resist as much as possible the inclination to strain. The application of a pad to the anus is sometimes of service in enabling him to keep from straining. Injections of small quantities of ice-cold water, repeated at short intervals have been recommended by Gairdner, of Edinburgh, and others, to check the discharges, perhaps their actual value has not been accurately ascertained. The use of rectal suppositories of different kinds is one of the best means of arresting the frequency of the discharges and allaying the irritability of the mucous membrane especially if the disease be confined to the rectum. Belladonna and iodoform applied in this way will allay tenesmus and the burning pain in the rectum, and also the vesical irritation so common in this trouble; but morphia, or the watery extract of opium is required to arrest the evacuation. This drug, also, strongly tends to prevent the depression of the nervous system which is so marked a feature of the severer forms of dysentery and enteritis.

This leads to the consideration of *stimulants*. The tendency to death is by asthenia, exhaustion should, therefore, be prevented by judicious administration of *food* which is the true stimulant, but when exhaustion is impending, alcoholic stimulants must not be withheld, but given according to the requirements of the case. During convalescence, which often is tardy, tonics, local and general are demanded. Among the former, hematoxylon is perhaps the best, and given in the form of a decoction it is often of great service. Among the latter class, I would mention particularly the solution of the pernitrate of iron and infusion of columba, or the last remedy by itself, as it has a marked tonic action upon the digestive organs.

PERFORATION OF THE LUNG.*

REPORTED BY R. W. CORWIN, M. D.,
Late Resident Physician to Saint Luke's Hospital, Chicago.

Master O., aged ten years, in October, 1879, while playing with a breach-loading pistol charged with a twenty-two hundredth cartridge accidentally shot himself. The ball passed through a cotton shirt entering the left chest just above the fourth rib in the region of the nipple, passing downwards and backwards emerging near the inferior angle of the left scapula, from whence it was carried by the clothing into the left shoe. The patient walked home which was near, told what had taken place and took a seat in a chair.

The accident occured about six miles from the doctor's office, which necessitated some delay in securing surgical aid. It was about one and a half hours after the occurrence of the injury that the doctor first saw the patient. He found him as above described, seated in a chair, suffering *very slightly* from shock, complaining of no pain or inconvenience except a slight smarting at the anterior mouth of the wound. A little blood was expectorated, but slight hemorrhage externally, and so far as could be ascertained no foreign substance had been carried into the wound with the ball.

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*The above interesting article I report through the kindness of Dr. Edwin Crocker, Narrowsburg, New York, the attending surgeon in the case.

The wounds were dressed with cotton saturated with tincture of arnica; patient placed in a recumbent position and an opiate given sufficient to produce quiet and rest.

On the following morning the wounds were redressed. The patient still complained of no pain but was quite restless. The internal hemorrhage apparently had ceased. The opiate treatment was continued and strict injunctions given, regarding keeping the patient perfectly quiet and allowing him to see no visitors.

No particular change in his condition on the second day.

On the third day when the doctor called he found the patient with a number of children playing on the porch, running about as though nothing had happened him. The wounds healed kindly and no further trouble arose.

There can be but little question that the ball passed through the left lung and was not deflected by a rib or some other body and carried around the chest rather than through it. The boy, previous to the accident was in perfect health, he never had had any trouble with his lungs. The hemorrhage seemed too extensive to have been caused by the blow of the ball upon the chest wall if it were deflected. The boy was not in the least frightened, neither was he injured at the time of the accident by a violent fall, therefore, without doubt, the hemoptysis was caused by the bullet passing through the lung tissue.

Although this is by no means an unique case, yet it appears a little strange that no more local, to say nothing of general disturbance, should have arisen.

REPORT OF OPHTHALMOLOGICAL AND OTOLOGICAL CLINIC OF THE MICHIGAN UNIVERSITY HOSPITAL FOR THE YEAR 1880-81.

UNDER THE CARE OF PROFESSOR FROTHINGHAM.
Reported by E. N. HAWLEY, M. D., Clerk of Clinic.

The whole number of patients treated during the year is four hundred and fifty. The whole number of diseases treated is five hundred and fifty-two.

Some patients having complicated diseases their cases are mentioned more than once.

These diseases were of both eye and ear. The following is a list of these diseases with the results of treatment.

DISEASES OF THE EYE.

Asthenopia, ciliary and muscular; twelve cases. All were relieved.

Amaurosis, tobacco; one case. Improved.

Astigmatism; nineteen cases. These were all corrected by proper glasses.

Atrophy of optic nerve; seven cases. Two of syphilitic origin and far advanced and not improved. Five cases went home to carry out treatment.

Exudative choroiditis with spots of atrophy of choroid; one case. Improved.

Blepharospasm; five cases. All relieved.

Blepharitis ciliaris; two cases. Both improved by treatment, but they did not remain until cured.

Blenorrhœa of lachrymal sac; four cases. All improved while treated in hospital. Left to continue treatment at home.

Cataract, senile; forty-two cases. Thirty-nine, uncomplicated were operated upon, and in all but three cases useful vision obtained. One of these three died, five days after the operation, of other diseases. Of three complicated cases operated upon, one received marked benefit, while two are still under treatment.

Cataract, traumatic; five cases. The lens was extracted in four of the cases, three recovering useful vision, while the fourth lost his eye as the result of his own imprudence. One absorbed with good result.

Cataract, membranous; one case. Improved by operation.

Cataract, soft; three cases. Removed by operation and useful vision restored.

Cataract, immature; three cases. To await maturity.

Cataract, congenital nuclear; one case. Iridectomy made, improving vision from 3-100 to 20-100.

Cornea, conical; three cases. Two improved.

Choroiditis; seven cases. All improved.

Trachoma; one hundred and eight cases. All very much improved by treatment while remaining in the hospital, but few stayed long enough for a thorough cure.

The majority were under treatment from six to twelve weeks, and then went away to carry on treatment at home.

Conjunctivitis, acute; twenty-one cases. They left the hospital either cured or greatly improved.

Conjunctivitis, gonorrhœal; one case. Cured.

Conjunctivitis, phlyctenular; two cases. Cured.

Chalazion; three cases. Relieved by operation.

Irido-choroiditis; three cases. All improved.

Painful stumps of eyes; three cases. Stumps enucleated and found to contain large calcareous deposits.

Sebaceous tumor in orbit; one case. Successfully removed.

Entropion; two cases. Benefited by operation.

Fistula of lachrymal sac; one case. Cured.

Glaucoma, non-inflammatory; five cases. Three benefited by iridectomy. The result of the other two cases not known, as the patients did not remain in the hospital.

Glaucoma, inflammatory; two cases. Both of which were benefited by an iridectomy.

Hypermetropia; seventy-four cases. Glasses were fitted in each case.

Hordeolum; two cases. Cured.

Injuries of the eye; twelve cases. Six, having within them a foreign body causing great irritation, were enucleated. In one the foreign body was removed, this patient being still under treatment. In four cases where the eye was injured by blows, the sight was saved.

Iritis; thirteen cases. All either improved or cured.

Insufficiency of recti muscles; nine cases. Eight relieved, one still under treatment.

Keratitis; twenty-four cases. All either cured or improved.

Kerato-globus; two cases. The sight having been lost and the eye painful it was removed.

Leucoma, adherens; one case. Improved by operation.

Myopia; twelve cases. Fitted with glasses.

Choroiditis, with floating opacities in vitreous humor; two cases. Both improved.

Optic neuritis; two cases. Much benefitted by treatment.

Neuro-retinitis; four cases. Improved.

Nystagmus; one case. Not treated.

Opacity of cornea; thirty-seven cases. Improved by treatment of lids when complicated with trachoma. In some cases an iridectomy was made to displace the pupil opposite a clear portion of the cornea.

Presbyopia; thirteen cases. Relieved by glasses

Ptosis; three cases. All improved.

Polycoria; one case. Not treated.

Pterygium; six cases. Removed by operation.

Choroidoretinitis; one case. Improved.

Strabismus, convergent and concomitant; twenty-seven cases. Relieved by strabotomy and properly fitted glasses.

Strabismus, convergent—not concomitant; six cases. Improved by strabotomy and other treatment.

Strabisimus, divergent; two cases. Relieved by operation.

Strabismus, deorsumvergens; one case. Much improved by application of electricity and other treatment.

Synechia, anterior; five cases. Three complicated. Two relieved by operation.

Synechia, posterior; seven cases. Four benefited by use of atropine, the others by an iridectomy and breaking up of the adhesions with a blunt hook.

Staphyloma, anterior; three cases.

Staphyloma, posterior; four cases. Benefited.

Stricture of nasal duct; seven cases. Benefited.

Tumors of eye-ball; three cases. Two not treated, The other being a malignant tumor, the eye was removed.

Tumor of orbit; three cases. One, a sarcoma, removed and the eye enucleated. One, a recurrent fibroid removed twice before, was again removed and has only returned to a slight extent. The third case, a sarcoma was removed with the eye. It subsequently returned, and the patient did not seek advice until in a hopeless condition.

Ulcer of cornea; eighteen cases. Cured.

Xerophthalmia; one case. Palliative treatment.

Trichiasis; eighteen cases. Improved by operation.

DISEASES OF THE EAR.

Chronic aural catarrh; twenty-two cases. Only ten cases remained in the hospital for treatment, and they were much improved. The others took prescriptions and went home to carry on treatment under care of their physician.

Suppurative, inflammation; eleven cases. All improved at time of leaving.

Polypus; two cases. Removed.

Perforation of drum; six cases.

Affection of auditory nerve; two cases. Not treated.

Disease of mastoid cells; two cases. Operations made and marked improvement secured. Neither patient remained until recovered. One case terminated fatally after leaving the hospital, the other has reported gradual improvement.

Sebaceous cyst of auricle; one case. Removed.

Tympanitis; two cases. Improved.

During the year there were one hundred and fifty-nine operations as follows:

For relief of blepharospasm	1
For relief of senile cataract	42
For relief of traumatic cataract	4
For relief of membranous cataract	1
For relief of soft cataract	3
For relief of chalazion	3
For relief of abscess of cornea	1
For relief of trichiasis	18
Enucleation of eye-ball	20
Removal of sebaceous cyst	2
Trephining mastoid cells	2
Iridectomies	12
Removal of pterygia	6
For relief of entropion	2
For relief of ptosis	1
For relief of strabismus, convergent and concomitans	27
For relief of strabismus convergent with paresis of external rectus	6
For relief of strabisimus divergent	2
For relief of stricture of nasal duct	7

This does not include many minor operations, which owing to want of time at clinic were not recorded. A number of cases have for the same reason, missed being recorded.

A CASE OF HYDROPHOBIA.

OBSERVED BY B. DE LIPTAY, A. B.

Peter Dahl, thirty-one years old, laborer from Norway, was admitted August 10th, to the county hospital in Chicago, Illinois. Dahl's father died after a surgical operation for necrosis of tibia, but his mother and two sisters are living yet and enjoy perfect health. Three other children died during infancy. Dahl himself, was also sick when he was a boy two years old, but he has forgotten the nature of that disease. Seven years ago, the patient suffered for several months with icterus, which gradually disappeared after medical treatment.

The patient had been a hard drinker, using beer and whisky to excess. There were scars about his head, face, back and extremities, proofs of his participation in various brawls.

Last March, an apparently insignificant accident happened to the patient; he was bitten by a small, raving dog on his left hand. But without a physician's assistance the wound healed entirely within three days.

On Monday, August 8, the patient worked as usual. During the afternoon he noticed that his head felt heavy and soon began to ache, especially in the posterior region. Yet, he ate supper and rested well that night. Next morning, the 9th of August, he ate some breakfast and drank a cup of coffee. But when he tried to drink another cup it was impossible for him to do so. As he began to feel sick with a severe headache, he laid down with the intention of going to work at noon. At nine o'clock in the forenoon a friend brought him some beer, which he attempted in vain to drink. He then tried water which at once made his throat feel as though he were choking. After this he could not even look at water without the same feeling. The following night he did not sleep well, and felt much worse the next morning, August 10. He then went out to see Dr. Fenger, an eminent Dutch pathologist and surgeon in Chicago. On his way to Dr. Fenger, the wind made Dahl almost wild and he had to stop often in order to get breath.

The patient could not drink water or look at it without spasm of the muscles of the throat, and on admission to the hospital he made convulsive movements every time he attempted to drink, and stated that he felt as though he was smothering. He stated besides, that the place where he was bitten has caused him no pain whatever at any time. On admission, patient complained of pain in the occipital region of head. A slight draught of air caused tremor of his whole body.

At 5:30 in the afternoon, the patient took twelve grains of chloral hydrate, although he had already received about eighty grains since admission. His temperature was 99.8° Fahrenheit, at the specified time.

At 6:45 the chloral was repeated, and at 7 o'clock nine grains of quiniæ bisulphate were administered to him, as his temperature was rising.

At 9:45 the latter was 101.3° Fahrenheit, his pulse beating with the rapidity of 106 a minute. He received again chloral hydrate, fifteen grains.

After careful examination with the ophthalmoscope, Dr. Jacobson declared that he was not able to detect any abnormality in the patient's eye. The pupils were neither dilated nor contracted; the retina was also found in a normal state.

At 10:30 in the evening, patient received again a fifteen grain dose of chloral, and soon after passed his urine, of which an examination was not made, at least so far as I know.

At about 11 o'clock in the evening the patient took the last drink of water by himself, and half an hour later the last dose of chloral without offering any resistance. After this time he grew more and more excitable and nervous.

At 12:45 he took his medicine with difficulty and repugnance. His pulse became as frequent as one hundred and eighteen, the patient being unable to sleep. All the symptoms of the "most dreadful of diseases to suffer or to witness" became more marked.

At 1:45 A. M., August 11, the pulse was 120 and the state of excitement great. He refused chloral, but took a quarter of an hour later, a solution of bisulphate of quinia.

At 3 o'clock another dose of chloral was administered to him with great difficulty. He could not sleep, but was raving and nervous.

From 8:15 in the morning he began to receive fifteen grain doses every hour. His bowels moved at 9, and at 10 A. M. his pulse was 128 and his temperature 102°. At noon he received one-third grain of sulphate of morphia hypodermically, and some hours later, as the morphia did not produce its desired effect, chloral fifteen grains and bromide one drachm by the mouth. But in spite of that it was found necessary to restrict the patient by means of a straight jacket, which was applied at 4:20. His mind was yet clear and he expressed the desire to see his wife and children. He was tormented with thirst.

I introduced a flexible catheter through the nose, and poured some water in it. This experiment upon my own responsibility terminated in failure, as spasm of the muscles of the throat set in and the patient spit the whole contents into my face. Another attempt by the patient himself to take water by suction through a tube was also unsuccessful. After receiving another dose of chloral hypodermically, curara one-tenth grain was given at 4:53, which was followed at 5:45 by another dose, this time one-sixth grain being injected, without apparent effect as patient continued to rave. Salivation was increasing, and the ejection becoming more difficult, on account of the viscidity of the saliva, adhereing to throat and mouth. His screaming was terrible and heard all over the large building; it had in fact some resemblance with the barking of a dog.

At 5:50 an attempt was made to inject again some chloral which the patient did not admit, throwing the syring to the ground.

At 6:25 the hypodermic injection of one-sixth grain of curara was repeated, which really quieted down the patient, who yet continued to mutter. His rectal temperature at this time was 109¼, pulse 130, weak.

As there was eminent danger of syncope, the straight jacket was removed and aqua amoniæ, one-half drachm injected hypodermically and also administered by inhalation without response. This was at 7:05.

At 7:08 the temperature was 109.5 and the pulsation ceased entirely. It is evident that in this case curara produced a humane (though on the part of the attendants an undesired) result.

THE DOUCHE IN TREATMENT OF CHRONIC NASAL CATARRH.

BY W. W. MATHER, M. D., SAUGATUCK, MICHIGAN.

Many remedies have been brought forward from time to time for the cure or alleviation of nasal catarrh so prevalent in humid climates; some of these remedies are good while others are worthless. Although many may be able to distinguish, it is at times difficult for the young practitioner to judge as to certain remedies and it is for his benefit I record my experience. Chronic nasal catarrh in warm moist climates seems frequently to be due simply to a relaxation of the fibro-vascular layer of the mucous membrane, lining the cavities rather than to any debilitated condition of the system or local disease and as each mucous follicle is surrounded on its external surface by a network of capillary blood-vessels, it is apparent that relaxation of the fibrous tissue will cause congestion which in turn will produce the profuse secretion of mucus still apparently normal in quality.

In this class of cases I have tried various remedies, but find the use of an astringent and sedative locally the most successful. My treatment is something as follows, of course, varying as needs be, to suit any peculiarity in the case. After any general treatment I may find necessary, I direct the following:

℞.	Morph. sulph	gr. v.
	Sodii chloridi	
	Sodii bibor	āā ʒij.
	Tr. kino	
	Aq. rosae	āā ʒj.
	Aq., q. s.	℥ji.

M. S. Put ʒij in ½ pint tepid water and use with douche night and morning.

If the person under treatment is engaged in business that will expose him to changeable weather, I direct its use only at night, before retiring. The patient must also be advised not to hold douche high above his head, as it will produce force that might prove injurious. After using the douche, a little irritation of nasal passages will be complained of, but this may be promptly relieved by smoking the whole or often only a part of a mitigated cubeb cigarette. I have tried several varieties, but find none as effectual or as pleasant as Dr. Charles King's. I consider the latter part of treatment important, as it so speedily allays irritation as to prevent congestion. I have tried each alone, but find their combined use much more satisfactory. I also insist on the continued use of these remedies until the membrane has time to regain a healthy condition.

EDITORIAL BRIEFS.

SUBSCRIPTIONS, requests for change of address, etc., should be directed to the publisher and not to the editor. In having an address changed, please give name of place *from* which as well as of that to which the change is to be made. Original articles, reports of cases and items of medical interest are solicited, and should be sent to the managing editor.

THE LATE BISHOP HAVEN.—By the death of Bishop E. O. Haven, scientific medicine has lost one of its strongest and most able advocates. As president of the University of Michigan for many years, he took great interest in the medical department and did his utmost for its advancement. Before the legislature he plead with special earnestness for this department, which was making so great a return to the State by restoring the blind to sight and converting paupers into able bodied workmen, to say nothing of its work in the advance of scientific medicine. Dr. Haven urged, as probably no one else outside the profession ever did, "the want of some systematic method of making known to the public the exact character of the medical profession. In a lecture before the medical class of 1868, he stated: "It is my conviction that one great reason why ignorant pretenders to skill in the healing art are so powerful in America and Great Britain is because regular physicians hold themselves and their science so far from the common understanding. * * The crudest and most absurd notions prevail and physicians wonder at the gullibility and stupidity of the people! For instance, we often hear it stated that there are two great rival schools of medicine or classes of physicians in this country, the homœopathic and allopathic. * * Homœopathy is a name assumed by a class of men to describe their own belief and action and is a proper appellation, self-chosen; but allopathy is a nickname given by them to the regular profession, who justly repudiate it as a name, and as expressive of a lie. * * I go to the legislature of the State. I ask for aid to the university, and receive a most respectful hearing. There is evidently an unwillingness to let a university that has suddenly leaped to the front rank in America, fall back relatively, as it inevitably will and must unless the State help it; *but then comes up a proposition to engraft upon the proposed aid a principle which, carried out according to the actual design of the movers, would completely ruin the University, making it a place of wrangling and partizan strife, and it is defended by such crude argumentation as betrays an infantile ignorance of genuine medical science and art.* But who is to blame? How can these legislators be expected to understand the claims of the medical profession, unless forsooth they are physicians?"

In speaking of the objections raised by some against educating the people in medical matters, he stated: "First among them is the position that incomplete knowledge is worse than absolute ignorance; the views of the half educated are more crude and absurd than of those whose minds are absolutely blank. But is it possible that this objection, routed from every other lurking place, is to find a final and eternal lodgement in medicine? Is this profession, which may claim to be the most scientific of all, the only one that is to cherish this most unscientific prejudice? Once it was proclaimed in religious matters that 'ignorance is the mother of devotion,' but now every religious party, and almost every individual defender of the faith, is anxious to wipe his hands of complicity with the dogma. Popular education is necessarily limited, but who in this age and country therefore recommends its abolishment? Who is thoroughly educated even in medicine? Is the opinion of any man infallible? Increase of knowledge does increase responsibility, and it brings into being some peculiar follies; but it is safer and better than ignorance. Medicine is no exception to a universal law. * * On no other plan can the profession exert its legitimate power. It is a positive duty of the profession, systematically and thoroughly to enlighten the public. * * No profession can do its work in the United States in this nineteenth century, except on the principle of educating the people and appealing to them in fact as umpires. They are the judges—why not prepare them to judge. It is my conviction that the truth can triumph on the principle of an open and a fair field. You cannot make two incompatible systems work together. The genius of our government is freedom; the genius of the old monarchies is to maintain right by force. There the rights of physicians are secured by law, and there it will do for physicians to stand aloof from the people and even boast of expressing their thoughts in such a dialect that none but their class can understand them. Here you can secure no adequate protection against stupidity and pretentions, and if you conquer them it will be by the power of truth."

These wise words have not yet been heeded by the profession. Indeed, in spite of them homœopathy has been engrafted upon the University of Michigan. And those of the regular profession who remained in the university to oppose error with truth, in the hope of having "a fair fight in an open field," have been abused and slandered by members of their own profession. Yea, the American Medical Association has aided and abetted homœopathy by persecuting with a narrow and bitter zeal the department of medicine and surgery. Is not truth stronger than error? Should scientific medicine fly from the field when confronted by this false system? The fact is that a few men, desiring to turn away from the university its large number of medical students and perhaps secure them to their schools, have found many dupes in the profession, who have been made to aid in this warfare on the department of medicine and surgery.

Neither has Bishop Haven's plea for the education of the people in medical matters been any better heeded. Could the American Medical Association take upon itself any more worthy task than that of systematically enlightening the public on medical matters?

We deplore most sincerely the death of this great man, a man, who, while standing at the head of his own profession, could see clearly and speak out so distinctly for the rights of another profession. By his death, truth has lost one of its strongest allies.

DR. FROTHINGHAM'S LETTER.—We desire to call attention to Dr. Frothingham's letter in this number. All the main facts of a very disgraceful procedure are given there. The certificates were given with the understanding that the belt was to be manufactured and advertised in a legitimate way; just as certificates are given to various manufacturers of pepsin, malt, etc. The use made of the certificates is disgraceful, and steps will be taken for their suppression. Those who wrote the certificates were made to beleive that the pamphlets had been suppressed, and it was not until two days ago (August 27), that one of them was obtained.

The *Michigan Medical News* in calling attention to this quackish pamphlet makes several serious misrepresentations. It makes Drs. Joy, Langley, Maclean, Frothingham and Palmer responsible for the authorship of the pamphlet. This is absolutely false in reference to all these men with the exception of Dr. Joy. Dr. Joy is mentioned as a professor in the University, while he is nothing more than an assistant in general chemistry, and had the editor of the *News* been prompted wholly by a love of truth and regard for the honor of the profession, he could have easily ascertained Dr. Joy's position in the university if he was not already familiar with it. We hope the *News* will be as ready to set the matter in its true light before the profession as it was to call their attention to the matter with gratuitous comments and insinuations of quackery against men whose lives have been such, that the editor of the *News* ought to have required most positive proof of their complicity in this matter before he made this charge or insinuation. The editor of the *News* well knows that the character of the four men last named by him is and always has been above reproach in such matters, and to say the least, he was a little hasty in his insinuations.

MEDICAL NEWS.

THE *Dublin Medical Journal* speaks of *epidermics* being due to infected milk.

PROFESSOR SKODA, the eminent Vienna authority on diseases of the heart and chest, is dead.

THE first number of the *Arkansaw Doctor* has reached us. We hope that all our brothers in that state are not so shabbily dressed as this representative.

ON the 13th of next October, Professor Virchow will reach his sixtieth birthday. He has been professor of anatomy in the University of Berlin twenty-five years.

F. D. SHEPARD, class of '81, University of Michigan, has been appointed lecturer on surgery in the Central Turkey College at Aintab. He is to begin his labors in 1882.

PENNSYLVANIA now has a law requiring the registration of physicians and forbidding non-graduates to practice; the usual "ten year exemption" being extended to old quacks.

PROFESSOR T. G. THOMAS has resigned the chair of gynæcology in the College of Physicians and Surgeons. Dr. P. F. Mundè has been appointed to the position as lecturer for one year.

DR. REYNOLDS, of the *Louisville Medical Herald*, found the life of a widower to hard to bear. He and his bride are now in Europe. Our associate, Professor Octerlony now rules the sanctum of the *Herald*.

THE *Mississippi Valley Medical Monthly* says that the University of Michigan is to have a chair of eclectic medicine. Brother Wise, where did you get this news? Our legislature has saved us from that disgrace.

PROFESSOR NUSSBAUM now has all bodies, which are to be used for demonstrations in surgical anatomy, injected with a mixture of carbolic acid, glycerine and spirit. This seems to remove all poisonous properties from the bodies.

BROMIDE OF POTASSIUM ACNE.—Dr. Finny (*Dublin Journal of Medical Science*) recommends the internal administration of arsenic and cod liver oil together with local applications of precipitated sulphur, spirits of camphor and rose water.

ACCORDING to late action of the board of regents, no instructor in the department of medicine and surgery of the University of Michigan will give a certificate of any kind to homœopathic students. The only certificates heretofore given, were for practical anatomy and chemistry.

DR. MACDONALD (*Edinburgh Medical Journal*) recommends carbolic acid, in doses of one-quarter minim to a child of six months, one-half minim for a year, and one minim for two years and upwards, as the best remedy for whooping-cough. He thinks the remedy destroys the specific germ.

THE following eminent American physicians have been elected Honorary Fellows of the Medical Society of London: Drs. Emmett, J. H. Billings, Bigelow and DaCosta. At the same meeting Professors Billroth, Haller, Nussbaum, Charcot, Tarnier, Verneuil, and Volkmann received the same honor.

MR. CHAPMAN (*Edinburgh Medical Journal*) found that an irritable bladder in one of his patients would hold only two ounces of injected fluid. Forcible dilatation by injecting each day a larger amount of a two per cent. solution of carbolic acid releived all irritability. At the close of treatment, sixteen ounces could be injected.

DR. P. E. NAGLE, who has rendered THE PHYSICIAN AND SURGEON much valuable aid in the way of translations and reports of cases and who performed the duties of managing editor for several months, has resigned his position as secretary of the faculty of the department of medicine and surgery, University of Michigan, and located for practice at Manitowoc, Wisconsin. The post of secretary will be filled by Dr. C. F. Dight, class of '79.

SCOTCH whisky certainly had the better of the proof reader of the June number of the *Edinburgh Medical Journal*. A writer on Davos, Switzerland, as a resort for phthsical patients is made to write as follows: "The open, pure air, warm milk, and the Italian wine of Valtelina, suffi— the cold douche, the regular change of walking and resting, by these things we are enabled to cure the cases included in the above-mentioned indications. As to the five douches existing at ciently good food (a principal thing), cold washings and rubbings, Davos, they are furnished most properly with a high pressure, and well-informed servants, and are applied by nobody but the physicians."

Report of Six Hundred and Sixty Cases of Midwifery.—Dr. Knaggs, of Australia, thus tabulates (*Dublin Journal of Medical Science*) his cases of midwifery:

Cases.	Primiparæ.	Pluriparæ.	Total.	Proportion.
(1) Natural labor with nothing abnormal occurring to mothers or child	...	...	460	
(2) Breach presentation	1	7	8	1 in 82½
(3) Footling	1	5	6	1 in 110
(4) Face	...	1	1	1 in 660
(5) Face to pubis	4	11	15	1 in 44
(6) Shoulder and funis	...	2	2	1 in 330
(7) Twins	2	6	8	1 in 82½
(8) Stillborn	2	9	11	1 in 60
(9) Premature birth (living)	...	3	3	1 in 220
(10) Miscarriages (third to seventh month)	4	8	12	1 in 55
(11) Malformed children	1	2	3	1 in 220
(12) Albuminuria (without convulsions)	1	...	1	1 in 660
(13) Convulsions—Hysterical	1	1	2	1 in 330
(14) Convulsions—Uræmic	...	3	3	1 in 220
(15) Dry labors	...	3	3	1 in 220
(16) Partial placenta prævia	...	1	1	1 in 660
(17) Post partum hemorrhage (controlable)	3	8	11	1 in 60
(18) Placenta retained:				
a By atheromatous degeneration	2	1	3	1 in 220
b Adherent	1	4	5	1 in 132
c From inertia uteri	4	4	8	1 in 82½
d From irregular contraction	3	6	9	1 in 73⅓
(19) Puerperal fever (five deaths)	...	5	5	1 in 132

Dr. K. places great reliance upon sulphurous acid in puerperal fever. His prescription is as follows:

℞. Acidi sulphurosi .... fʒiij.
Syrupi aurantii corticis .... fʒj.
Aquæ puræ .... ad fʒviij.

M. S. A teaspoonful in a wineglassful of water every two or three hours as suits convenience or inclination.

[In studying the above table it would be interesting to know if Dr. K. was in the habit of examining the urine of these patients. Four cases of albuminuria out of six hundred and sixty midwife cases seems wonderfully small.—Editor of The Physician and Surgeon].

CORRESPONDENCE.

FIRST DAY OF THE INTERNATIONAL MEDICAL CONGRESS.

LONDON, August 7, 1881.

EDITOR OF THE PHYSICIAN AND SURGEON:—As to-day is Sunday and I have sometime to rest after seeing and hearing so much for the past few days, I will comply with my promise and send you a few imperfect notes of the doings at this, the seventh and greatest international medical congress. The congress met Wednesday at Saint James Hall. At the appointed hour, 11 A. M., the chair was taken amid great applause by Sir Wm. Jenner. He stated that when the Queen gave her sanction to the Congress and His Royal Highness, the Prince of Wales, consented to open the meeting, its success was assured. The royal family has always shown itself the friend of scientific medicine. We have come from all parts of the world; each to bring his mite of knowledge and all to receive information from others. Commerce is called the golden girdle of the world, binding nations together by common aims; but science binds men by a girdle, whose links are stronger than those of the golden girdle of commerce. Knowledge is more precious than gold. With every increase in the world's wealth the absolute value of gold diminishes; but each addition to science renders facts already attained of more value. Commerce separates as well as binds. Discoveries in the practical branches increase pecuniary competition and strife; but every improvement in medicine is free to all the world. The less the physician, working in the true interest of his profession, seeks self-aggrandisement, the greater the benefit to the science. The ideal physician has in view the good that he may do for others and not his own narrow interest. One English physician—Edmund Parkes—approached very nearly to this ideal physician. All medical discoveries are common property. You are here to spread the truth you know and to learn from others the truth they have to communicate.

The Secretary-General, Mr. MacCormac, now gave a brief outline of the work proposed to be done by the congress.

Sir James Paget, Bart., was then elected permanent president.

The Prince of Wales then opened the congress in a short speech: I have gladly complied with the request to open this congress. Amongst my reasons for so doing, is my belief that few things can tend more to the welfare of the human race than that the educated men of all nations should from time to time come together for the promotion of the departments of knowledge to which they devote themselves. Especially is this true in the study of medicine and surgery. The varieties of climate, of habit and of social life must give to physicians knowledge which is of both interest and value to the physicians of other nations. I am happy to see that much time will be given to the discussion of important questions relating to public health, to the cure of the sick in hospitals, and in the houses of the poor, and to the welfare of the armies and navies. The devotion with which members of your profession are ready to share in the dangers of climate, the fatigues of war and to study every means not only for curing but for preventing disease, deserves the warmest acknowledgement from the public. I am glad to see in this hall medical men from every country of Europe and from the United States of America. The list of officers of the congress, including nearly every one of eminence in the profession in this country, shows the good feeling of the profession here. I sincerely congratulate the committees on the good promise of success. The toil of the secretary, Mr. MacCormac, has been great, but I am sure that he will be amply repaid if the improvement of the science of medicine be materially promoted, for the knowledge of medicine must always be followed by increase of the happiness of mankind. Gentlemen, I now declare this congress open.

Sir James Paget then delivered his address: It is not necessary for me to defend the calling of an International Congress. Such meetings are becoming common and have already given evidence of being of great service. Let me rather suggest some work to be done and the spirit which should pervade us. In the largest view it may seem that our purpose is to diffuse knowledge. And this object, I have no doubt, will be secured. It is safe to say that in the casual meetings of this week there will be a larger diffusion and interchange of medical knowledge than has ever before been in the same time. Here we have a great variety of minds, which have been developed under a great variety of circumstances, and bringing these together in one common interest can but result in good. From various opportunities of study, men have come here, and everyone has something to teach and much more to learn. But it is not proposed to leave the good work of the congress to chance. Certain subjects have been selected for discussion before the different sections. The chief need of some of these question, seems to be the collection of a great number of facts observed by different men, at different times and under different circumstances. Such a meeting as this is eminently the place for the discussion of such questions. There will be much confusion and some error, but from this we hope to arrive at many truths. It may be thought that unity will be lost by dividing into sections for these discussions. But in each section, the strongest minds will have plenty to do. The fault of specialism is not narrowness but self-sufficiency. If the field of any specialty be narrow, it may be dug deep. In science as in mining a narrow shaft carried deep enough may reach the richest stores of wealth. Not in medicine alone, but in every department of science, some of the grandest results have been produced by thorough study of subjects which to the common mind seem small and trivial. And study in a congress like this may be a remedy for self-sufficiency. Each section in studying its own subjects may prove or disprove the tenents of another section. The result will show in its true value when compared with other deductions, when studied from other stand-points. In science every fact has a value, not only to its given specialty, but to the whole. Nay more, it has the potentiality of future growth and applicability. It would be difficult to think of anything that seemed less likely to become of practical value than the researches of the few naturalists from Leuwenhœck to Ehrenberg, who studied the most minute of living things. Men boasting of being practical might have asked, "What good can come of it?" Time and scientific industry have answered: "Those researches have given a truer form to one of the most important practical doctrines of organic chemistry; they have introduced a great beneficial change in the most practical part of surgery; they are leading to one as great in the practice of medicine; they concern the highest interests of agriculture; and their power is not yet exhausted."

Year after year the anæsthetic properties of laughing gas and ether were known. The one fell to the level of wonders displayed by itinerant lectures, and students made fun with the other. They were the merest practical men looking for nothing save that which would be immediately useful. The history of science has many similar facts which teach that any man will be both wise and dutiful if he will patiently and thoughtfully do the best he can, in the field of work in which, whether by choice or chance, his lot is cast. There let him at least search for truth, reflect on it and record it accurately.

In medical science the existence of parties founded on dominant theories has always been injurious; a sign of satisfaction with plausible errors, or with knowledge which even for the time was imperfect. The dominance of doctrine has promoted the habit of inference and repressed that of careful observation and experiment. The specialism of doctrine can enchant into mere dreaming those that should be strong and alert to the work of free research.

We may read the history of the progress of truth in science as in palæontology. Many things which, as we look far back, appear, like errors, monstrous and uncouth, were in their time good and useful, as good as possible. They were the lower and less perfect forms of truth, which amid the floods and stifling atmospheres of error, still survived; and just as each successive condition of the organic world was necessary to the evolution of the next following higher state, so from these were slowly evolved the better forms of truth which we now hold.

They were necessary steps to the better present, even as the present is to the still better future. Let us do what we can to aid this development. Let us constantly bear in mind the nobility of our profession.

Let us resolve to devote ourselves to the promotion of the whole science, art and charity of medicine. Let this resolve be to us a vow of brotherhood; and may God help us in our work.

At 3 P. M. the various sections met and listened to the addresses of the section presidents. I had the pleasure of listening to the one to the physiological section by Professor M. Foster. It was historical wholly and confined to the development of physiology in Great Britain. To the physiologist it was of great interest, but probably would not be so appreciated by the general practitioner.

All these addresses before the section, are published in full in *The Lancet* of yesterday. The majority of them were historical and especially devoted to the study and review of English workers.

At 4:30 P. M. Professor Virchow gave an address on the "Value of Pathological Experiment." The lecture was delivered in German and at Saint James Hall. I can only give a brief outline of this very interesting and valuable address, referring any who may desire to read it (or any of the other addresses) in full to *The Lancet* of August 6: At the last International Medical Congress at Amsterdam, as reporter on the training of medical men, I discussed the question as to how far the experimental method was necessary in teaching. I thought that it should be used to as large an extent as possible, and that vivisection is indispensable in teaching. I stated without contradiction that "all those who oppose vivisection for scientific purposes have no conception of the true importance of science or of the value of this method of acquiring knowledge."

In the past two years the opposition to vivisection has increased greatly. It has spread to many countries. Last March a Leipzig society, for the prevention of cruelty to animals, petitioned the German Reichstag that cruelty to animals under the pretence of scientific investigation should be punished by imprisonment for from four weeks to two years and by deprivation of citizenship.

Representatives of our profession should defend their position on this question. The most powerful means of protection is truth founded upon sufficient knowledge. The attacks upon us fall into two classes. (1) Some say that modern medical science is thoroughly materialistic; it sins against morality and religion. (2) Others say that medical science has not been materially benefitted by vivisections. It was not until the fourteenth century that the church permitted the dissection of human corpses. Hitherto the knowledge of anatomy among

Christians was confined to the study of the lower animals. Even in the middle of the seventeenth century Wepfer, the renowned discoverer of the hemorrhagic nature of apoplexy, was derided for dissecting human bodies. To those who told him that it was disgraceful to stain his hands with blood and ichor, he replied that his hands could be washed with a little water, but ignorance in anatomical matters was a disgrace to physicians that could not be washed away with all the water of the ocean. In the eighteenth century it was pathological anatomy that replaced mysticism with realism, speculation by autopsy and uncertainty and guessing by systematized thought. Its opponents called this also materialism. By vivisection, Harvey discovered the circulation of the blood, Malpighi showed capillary circulation, Ed. Weber demonstrated the effect of the vagus on the heart, Claude Bernard ascertained the influence of the sympathetic on the blood vessels of the head and neck, Galvani laid the foundations of electro-therapeutics, Humboldt discovered the irritability of muscles, etc. These and hundreds of similar results, conferring inestimable benefit upon the human race, have been achieved by experiments upon animals.

I will not attempt to farther follow this renowned scientist in this address, which will forever stand as a bulwark against the sickly sentimentality, which has done so much to fetter the progress of medical science in Great Britain, and which will endeavor to force itself upon other nations. We, in America, will have this question to contend with at no distant day. Let us begin to show the people that the progress of medical science, and as the illustrious Prince of Wales stated, the happiness of mankind is dependent in a great measure upon carefully conducted experiments upon the lower animals. The wise anatomical bill enacted by your last legislature gives me hope that the lawgivers of Michigan at least, may never fail to appreciate the truth, and we, members of the medical profession, should see that the people are furnished with "sufficient knowledge" on the subject.

I will not apologize for the length of this letter, but hope to give you in my next some of the more "practical" points discussed in the various sections. Yours, MEDICUS.

TO THE MEDICAL PROFESSION.

As the *Michigan Medical News* of August 25, contains an editorial article charging that I and some others of my colleagues have contributed to a quack pamphlet, advertising Dr. Joy's electric belt, I feel called upon to deny this statement made in the editorial referred to, and give the facts so far as they exist in regard to myself.

Sometime last year, I was called upon by Dr. Joy, who was well known by me as an assistant to the professor of chemistry in the medical department of this university. He showed me a galvanic belt he had constructed for the treatment of a surgical case in the care of Dr. Maclean, and showed me the endorsement of Dr. Maclean, in the form of a certificate. He told me that he desired to make arrangements with a manufacturer for the construction of a number of the belts. (The one he showed me was adapted for application to the leg for the treatment of paresis of the extensor muscles, and I was not informed that he had any other devices). He said that the manufacturer would have to invest something in them, and he wished to convince him that the belt was efficient and he would like a certificate from me. I told him I had no practical experience with its workings but would examine it and give him my opinion of its construction, supposing it was to be manufactured in a legitimate way and sold to the profession or on their prescription as many other such appliances are. I accordingly examined it and wrote the following certificate:

"I have examined Dr. Joy's galvanic belt and find it a convenient and efficient instrument for maintaining and applying a mild and continuous current of electricity. It is, of course, useful whenever such a current is of benefit."

I had then the fullest confidence that Dr. Joy would use the certificate only for the purpose mentioned. A few weeks afterward Dr. Joy showed me a pamphlet which he professed to have received just then and which he professed was published without his consent or approval and he appeared to be much annoyed. I did not read the pamphlet but saw by its make up what its character was, and told Dr. Joy he could not stand any such a thing, and advised him to take immediate steps to stop the matter where it was. This he said he would do, and I supposed he would accomplish it. Later however it came to the notice of several of us that these pamphlets were in circulation. Dr. Joy was summoned before the faculty and denied ever having authorized the publication of our certificates, or ever having sanctioned the publication of the pamphlet. We had then no copy even of the pamphlet and knew nothing of Dr. Joy's letter endorsing it. Drs. Palmer and Joy were appointed a committee to investigate the matter, and to take such measures as would be found necessary to stop the use of our names in any way in connection with the matter. They were directed to seek legal advice and to institute such proceedings as would be effective, if within the law there was any power to do it. Dr. Joy then expressed confidence that he could stop the matter himself, and, later, assured Dr. Palmer that he would attend to it, and hence no active proceedings were instituted; Dr. Palmer and others believing that an end had been put to the circulation of the objectionable pamphlet. Only within a few days have we learned to the contrary, and efforts will be at once made to stop this unauthorized use of our names, and to purge the faculty of any member shown to have been responsible for, or in sympathy with, the publication of the pamphlet.

Under these circumstances it seems very unjust to call me a contributor to the pamphlet. The writing of such certificates for proper things and for proper uses is quite common among medical men and by a similar breach of good faith many of them could be impressed to serve an equally quackish cause, without the consent or knowledge even of the writer. This experience will serve to make me at any rate in the future much less obliging in this particular. G. E. FROTHINGHAM.

THAT EPIDEMIC OF METASTATIC PAROTIDITIS.

Dr. Miller's letter in our July number has called out a few replies, which we condense as follows:

J. S. Herries, M. D., Janesville, Iowa: "I have not seen any metastatic cases."

W. J. Huff, M. D., Saint Meinrad, Indiana: "There has been no epidemic of mumps here."

W. T. Collins, M. D., Grand Forks, Dakota Territory: "There has been a wide spread epidemic of mumps in this region; no metastasis."

H. M. Wheeler, M. D., Northfield, Minnesota: "There has been an epidemic of mumps here with frequent cases of metastasis. The acid test has in all cases failed."

W. H. Smith, M. D., Saint Clair, Michigan: "There has been no epidemic of mumps here. There has been considerable quinsy, which the quacks pronounce 'diphtheria.'"

L. G. North, M. D., Tecumseh, Michigan: "There has been no epidemic of mumps here. About six cases have been reported to the Board of Health. Have seen one case of metastasis."

R. D'Ary, M. D., Romeo, Michigan: "To my knowledge there has been but a limited number of cases of mumps in this neighborhood, all of a mild character and without metastasis. Among the horses a distemper resembling mumps has been somewhat frequent."

J. A. Beebe, M. D., Westfield, New York: "In a recent epidemic of mumps here, there was no particular tendency toward metastasis. Physicians are not usually called to simple cases. Only five cases of metastasis have been noticed here, either by myself or colleagues, and this is a very small per cent. of the total number of cases of mumps."

F. J. Groner, M. D., Big Rapids, Michigan: "No such epidemic has prevailed here. I will simply give hospital statistics as they are easy of access and accurate. There were twenty-six cases of mumps in Mercy hospital. All the patients were males and from sixteen to thirty years of age. There were five metastatic cases. Three of these apparently from exposure to cold."

TRANSLATIONS.

Translations from Scandinavian Journals for THE PHYSICIAN AND SURGEON.

BY J. S. JOHNSON, M. D., ORFORDVILLE, WISCONSIN.

A CONTRIBUTION TO THE DIAGNOSIS OF INTUSSUSCEPTIO INTESTINALIS.

BY DR. F. FRIER, COPENHAGEN.

The diagnosis of *intussusceptio intestinalis* has, by the experience gathered through many years and the many lately devised aids in diagnosis, especially chloroform narcosis, been rendered comparatively easy and certain. When in addition to the ordinary symptoms of sudden and complete obstruction of the bowels, there can be established the existence of a long (sausage-shaped), tender tumor with a dull percussion sound, in the part of the abdomen where the large intestine ends, or when an invaginated portion can be reached by the finger in the rectum, the diagnosis may be considered pretty well established. The diagnosis is strengthened when the meteorism is little or absent, when in the place of complete obstruction to passage, more or less copious slimy discharges, mixed with more or less blood, appear early in the disease.

If the tumor can be felt through the abdominal parieties or in the rectum, this may be considered pathognomic, but in very many cases this becomes impossible, even in complete narcosis, by reason of overlying portions of intestine distended with fluid, solid or gaseous contents, the liver, the firmness or amount of fat in the parieties, etc.

When no tumor can be discovered or when it is ill defined and its nature doubtful, the discharge of bloody mucus or almost clear blood, usually becomes the most reliable diagnostic symptom, as this rarely occurs from any other cause.

If in the case of an adult there is considerable hemorrhage of this nature, while the symptoms of obstructed passage are either faintly expressed or of short duration and of a passing nature, and no characteristic tumor can be discovered, one comes face to face with diagnostic difficulties which may baffle the most conscientious and skillful weighing of the importance of the various symptoms. The question then becomes one of differentiation between the various acute inflammatory affections of the large intestine connected with bloody discharges. The hemorrhage, however, caused by the purly catarrhal affections is seldom profused at all, unless the intestine be the seat of extensive ulcerations. Lastly the hemorrhoidal discharges, as well as those caused by neoplasms (polypi, cancer, etc.,) could scarcely be misconstrued if the examination be at all carefully made. The literature on the subject shows, too, a great number of cases where invagination has not been recognized and the cases considered inflammatory, usually some dysenteric affection. Cruveilheir calls attention to the fact that such errors are unavoidable and cites cases. The same observation has also been made by others, and it was the occurrence of the following case, whose history is given below that occasioned the foregoing remarks:

C. L., a baker's apprentice, unmarried, came to the "Kommune Hospital," November 30, 1879. The patient stated that he was in the habit of drinking one-fourth litre of liquor daily, had been treated for condylomata four years previously at the hospital, but with the exception of a bronchial catarrh last autumn had been well, although some years since had three attacks similar to the present, but of short duration. The patient has lately been well, with good appetite and regular bowels, until four days before his arrival at the hospital, when he was attacked with some pains in the umbilical region, radiating to the sides and groin, coming in distinct paroxysms, with intervals during which pressure gave relief. Simultaneously there occurred emesis, principally of the last ingesta, and the passage of thin, foul-smelling, spare fæces about thrice daily, without pain or tenesmus, and containing some dark, tar-colored substances. Occasionally some flatus and some febrile reaction.

On examination, the patient was found powerfully built, light quiver of the hands and tongue, position on right side as the pains increased on dorsal decubitus. Thoracic organs healthy. Liver not enlarged and no icterus. Abdomen full, somewhat bloated and distended, tenderness in right iliac region which seemed to be more than normally full and gave a slightly dull percussion sound, elsewhere tympanitic. No hernia, the tongue moist with a light, white coating. Temperature, 39.4°; pulse, 92.

December 1: During the night thin stools, with torminia vesical tenesmus, ten times. No pain between. The stools passed during the night were mixed with fluid blood at first, later were grayish, muddy, very foul-smelling and contained clots of blood and mucus. also some yellowish, slimy shreds. To the right of the umbillicus below the ribs some dullness and tenderness, also some feeling of resistance, neither of which could be detected anywhere else, but no definite characteristic swelling could be found. After remaining in this condition and passing five or six stools of the same nature during the day, an examination under complete chloroform narcosis was made in the evening. The sense of resistance, corresponding to the position of the transverse colon remained, but no characteristic "sausage-shaped" tumor could be discovered. On rectal exploration, the anterior wall was found in a state of diffuse infiltration, the rugæ prominent, and the surface rough and somewhat ulcerated. An injection of about 1500 cubic centimeters of dilute carbolic solution was made during the anæsthesia, and was retained for some time. Morning temperature, 39°; pulse, 84. Evening temperature, 39.6°; pulse 92.

During the following day, discharges of the same nature continued ten or twelve times during the twenty-four hours, but were not accompanied with any pain except some smarting of the anus during the first two days. Desire to micturate quite frequent with some retention so that on December 8, and subsequent days catheterism had to be resorted to. This symptom, however, may perhaps be ascribed to the large and frequent doses of opiates administered per orem and anum. From December 7 and on, the discharges became more bloody, amounting to a whole chamber vessel full of almost clear, clotted blood during the 7th and 8th. The appearance of the patient became that of extreme anæmia, pulse small, and prostration extreme. Tongue dry and anorexia complete. From this time the fever declined, temperature reaching normal on December 11. From this time the passages became less frequent and contained less blood, the pulse grew stronger, and on the 14th the patient had some appetite. On this day also for the first time he passed moulded fæces. Rectal exploration showed the walls of the gut thickened, nodulated and rough. No blood on the exploring finger. During the 15th and 16th—the twenty-first day of the disease—the evacuations again became more frequent, and contained two gangrenous pieces of intestine. The structure of the intestine could not be recognized, but from one of them there was given off a diverticulum, one centimeter wide and ten centimeters in length—the processus vermiformis—gangrenous at the base, but otherwise in a state of preservation, except the very apex which was almost completely torn off. On the inside of the diverticulum the mucous membrane was plainly discernible. (A woodcut is given). After this the diarrhœa disappeared, he was free from pain, had some appetite, but was very weak and perspired considerably. Temperature almost or quite normal. Abdomen slightly distended, especially to the right side where it was somewhat prominent and gave a dull sound, but nowhere any tenderness. He regained his strength but slowly, and this condition of his abdomen remained until sometime in January 1880. When the last rectal examination was made February 2, there still remained a circular cartilaginous thickening of the gut, which was studded with small nodes of the size of a pin head. Reconvalescence was also retarded by a scorbutic affection with extravasations under the skin over the tibiæ, also an abscess followed by some ulceration near the left heel, which healed very slowly. Patient was discharged March 27, after having been in the hospital one hundred and eighteen days.

Besides opiates and fomentations, demulcent and astringent preparations as decoction of krameria were administered. The more copious hemorrhages were treated by the tincture of chloride of iron, and pieces of ice introduced up the large intestine. Beef essence was employed to sustain the nutrition, and was well borne.

It was but natural that the sudden and severe abdominal pains with emesis and bloody stools and the doubtful tumor in the region of the colon, should lead one to suspect an invagination. It was with this probability in view that the examination under chloroform narcosis was made. When, by reason of the firmness of the abdominal muscles, and because the tumor or at least a portion of it lay behind the liver, the result of this examination was negative, as the symptoms of obstruction partly disappeared, and finally when by the rectal exploration the existence of an inflammation in the rectum was demonstrated, the belief of an invagination grew less day by day. The diagnosis of a dysenteric affection was unsatisfactory—no dysentery existing in the city at the time—as there was no marked tenesmus, the evacuations fuller than usual in dysentery, and although mixed with blood, were never characteristic of dysentery. Under these circumstances the only alternative was to let the question of diagnosis rest, to isolate the patient as a measure of safety, and to adopt a symptomatic course of treatment.

The doubt was dispelled when as above stated, the portion of the intestine was passed, the subjective symptoms and general condition of the patient at the same time ameliorating.

From what has preceded, the course of events may be explained somewhat as follows: The invagination, involving the ileo-cæcal portion of the intestines—the end of the ileum constantly pushing the ileo-cæcal valve before it—had already begun four days before the patient's arrival at the hospital. The usual congestion of the inner and middle folds of intestine involved was present and sphacelation had probably begun ("foul-smelling discharges containing * * * slimy shreds, etc.," see history). The sphacelated portion was probably slowly and by small particles separated and passed through the large intestine. On their way down, these grangrenous parts in conjunction with the free secretion from the parts adjoining the sphacelus, produced a violent inflammation all the way down to the anus. First, when the sphacelation was complete did the copious bloody discharges cease and the consequent mucus inflammation subsided. When the gangrenous parts were evacuated convalescence began.

[From subsequent symptoms not here given the author concludes that the complete restitution of the gut and subsidence of all inflammation occupied about a month.—TRANSLATOR].

With the exception of the before mentioned diagnostic difficulties, the case presented nothing of any unusual interest, except that the evacuation of sphacelated portions of intestine scarcely comes under the head of every day occurrences, the patient at the same time escaping the dangers that threatened life in the shape of perforations with consequent peritonitis, extensive suppurations in the neighborhood of the affected portion, thrombosis of larger vessels causing mortification, etc.

The seat of the disease could in this case be determined with more accuracy than in many others, but it is by no means the only occurrence of the evacuation of the cæcum and its appendix. A hasty examination of the literature was rewarded by finding reports of six similar cases during the last forty years, and it is not improbable that many more could be found on careful examination.—*Norsk Archiv.*

Translations from French Journals for THE PHYSICIAN AND SURGEON.
(IN ABSTRACT)
BY R. A. PACKWOOD, LES ILES, BERMUDAS, WEST INDIES.

HEMOGLOBINURIA FROM COLD.

BY DR. MESNET.

The clinical researches, of late years, describe in the class of hematuriæ, one kind, which by its characters, forms, symptomatology, etc., merits a particular name in our nosological treatises. It is "paroxysmal hemoglobinuria," improperly denominated, and for which Dr. Mesnet (*Archives Générales*) proposes to substitute the name "hemoglobinuria from cold," one which is more correct and in accord with the etiology and characters of the disease.

It has, as an essential symptom, bloody urine, in which is found an abundance of the coloring element of the blood, hemoglobin, also albumen in considerable quantity, without the presence of red corpuscles or their debris. It is therefore a partial and incomplete hematuria, if I may be allowed to call it thus, since the blood deposits in the urine only some of its constituent elements.

It is to George Harley that we owe the first description of this disease, which he called "intermittent hematuria." In a little time afterward, Dickinson published some analogous cases, then other English authors, Gull, Murchison, Pavy, and Hassal. Thudichum gives it the name "intermittent cruenturesis." A succinct account of it may be found in an article "Paroxysmal Hematuria" by W. Roberts, in "Reynold's System of Medicine." Many others, Germans, French and Italians, have written on this subject and differently designated it. There is a critical study of the pathology of this affection by Dr. Ramloh, in the *Monthly Review* for 1880.

We are, therefore, in the presence of a new disease, which has not yet taken a place in our pathological treatises, but which, however, presents itself so clearly marked, that the clinician will readily recognize it at sight.

Two essential facts characterize it: (1) Bloody and albuminous urine; (2) Complete absence of red globules in the urine.

To this group of symptoms clearly defined, it is important to join another not less peculiar to this affection, I refer to its critical or paroxysmal manifestations, which has given rise to the name, "paroxysmal," "periodical" or "winter hematuria" of the English. In fact the passage of hemoglobin into the urine is always an accidental and transitory symptom, due to a determined cause, the *impression of cold.*

The relation of cause to effect was established in a very evident manner by some cases that I collected whilst in England, Germany and Italy, and sufficient proof furnished by observing them. Moreover, we have been able to provoke at will, and a great many times, attacks of hemoglobinuria, by submitting the patient to the action of *cold* and noting the effect.

In order to obtain bloody urine, it is necessary to expose the patient for a half or one hour, to a low temperature. After some hours continuance, the paroxysm ceases as soon as the patient becomes warm, and if he remains so, the urine gradually returns to normal condition during the day. Judging from the unity of form and symptoms found in all the true hemoglobinuriæ thus far studied, one patient seems to have served as the subject of observation for all.

The following are the observations made on a patient under my care at the hospital Saint Antoine, and which I studied several months with the aid of my excellent colleague Professor Hayem. His hereditary antecedents did not present anything particular:

We found measles in his infancy, typhoid fever during his military service, syphilis about five years ago, on which occasion and for which he was treated for three months, á l'hôpital du Midi, without having since presented any manifestation of return either on the skin or mucous membranes. Two years ago he had a slight attack of jaundice (icterus) from an indeterminate cause, this lasted three or four weeks and disappeared. Had no intermittent fevers at any time. Did not have hemorrhagic diathesis. No hematidrosis.

On the 4th January this patient presented himself to me for consultation, at this time he was profoundly discolored with a yellow tinge of the skin. I thought the disease must be an organic affection and in the cachectic stage. On visiting him the next day he told me that his health was generally good, but that each time he voided dark red urine he became pale and anæmic and suffered as at present. I told him to let me see him urinate and we found the urine clear, limpid and slightly amber colored. No sugar nor albumen. Questioning him more closely, he told us that three years ago, being in good health, he noticed to his great surprise that he passed urine the color of red wine, but feeling no malaise gave no care to this indisposition. However, he soon noticed that the same phenomenon produced itself each time he was submitted to the action of cold, especially from cold feet; said that he had nothing of the kind in summer, and that during winter he could easily prevent an attack by confining himself to bed and avoiding with care all sources of cold.

The examination which we made of all his organs allowed us to establish their integrity. The digestive tract, intact and good appetite. The lungs sound. The heart sounds were normal with a slight blowing at the base. The first sound prolonged itself by a soft murmur into the vessels of the neck. Palpation over the abdomen dull as also over the renal and hepatic regions; the liver descended by two breadths of a finger below the false ribs, but it was drawn down proportionally from its superior limit, which nearly established its normal measure. His muscular power was not diminished. No appreciable emaciation. No trace of fever. The cachectic palor of the skin was not accompanied with any appearance of icterus upon the conjunctivæ more than about the buccal mucous membrane. The urine clear, as already stated, and the fecal matters colored.

On our visit the next day (6th January) we made the patient urinate before us, his urine was like that from the previous night, limpid, without a trace of albumen. Then he went into the garden and walked freely in the open air, under the supervision of a nurse or attendant. Temperature was about 0°. In half an hour he came again to urinate, and more than filled a goblet with bloody urine, almost the color of Bordeaux wine, and translucent. Examined by the spectrocope, by M. Hayem, it gave in a very clear manner, the spectrum rays for hemoglobin; with the microscope no trace of red blood corpuscles could be found. Treated by heat and nitric acid, it produced a heavy precipitate of albumen which was brown from the red color of the urine. The remainder left a light deposit in the glass which we examined later.

What had the patient felt during the experiment to which we had just submitted him? Fifteen or twenty minutes after his arrival in the garden he felt a very acute coldness in the feet; immediately afterward slight chills; then headache accompanied by a half vertiginous state; a painful sensation from epigastric constriction; general malaise with slight numbness and qualmishness without nausea or vomiting.

Thermometric examination made before and after the experiment, detected a difference in temperature in accordance with the pathological facts which had just been produced. The temperature had gone up two degrees, it was 36° at the beginning and 38° during the paroxysm. The patient went back to bed and did not leave it during the day, being charged to save the urine each hour. At the first hour a new mixture of urine much more deeply colored than the first—the color of Malaga wine. At the second hour the same kind of urine as the preceding. At the third hour the tint was less deep, nearly like Bordeaux wine. At the fifth hour, my interne, M. Havage, noted the return of the urine to the normal state, with complete disappearance of albumen.

The experiment which we have just described, was sufficient to demonstrate what we desire; we repeated it on the 9th, 11th and 31st of January, 12th of February and 1st of March and each time saw the same reproduced with same conditions, which Claude Bernard assigned to his scientific experiments, that is to say, that with each experiment, the patient being submitted to the same influence of cold, the same phenomena were reproduced.

The patient stated that this had been his condition three years ago. Some days after the attack the jaundiced color of the skin would disappear but it (the skin) always remained pale. The average pulse was 70, temperature about 36°. Quantity of urine for twenty-four hours between 12 and 1400 grammes specific gravity 1015–1020. Reaction slightly acid. Average quantity of urea was between 20 and 22 grammes. No trace of albumen. No sugar. The blood having been specially examined and studied by M. Hayem, I will complete this paper by presenting the remarks which he kindly gave me.

I have examined and experimented with the blood and urine of the patient of my colleague, Dr. Mesnet, and found:

(1) The urine contained at the time of the paroxysm a certain quantity of hemoglobin, the two oxyhemoglobin bands were shown by spectroscopic examination. By adding a little ammonium sulphide, the two rays were immediately changed into the one characteristic band of reduced hemoglobin. An aqueous solution of iodine and iron(?) produced a granular precipitate, in which I several times noticed little fragments of granular tubes, coming, probably from the uriniferous tubules. This reaction did not show any stroma (frame-work) of the globules colored by iodine.

This urine, moreover, possessed qualities common to acid urine, that of preserving without breaking the red globules of the blood. The red corpuscles of the patient behaved like those of normal blood. Chemical analysis made for the purpose of detecting oxalic acid gave a negative result.

I sought by means of a chromometric procedure, to determine the quantity of hemoglobin contained in one of the darkest samples of urine, and I produced the same color by making a mixture of about seven parts of blood to one hundred of urine.

(2) The examinations of the blood showed that the patient had become anæmic under these losses of hemoglobin. The blood lesions corresponded to those of the first stage of anæmia. The red corpuscles were very little altered, and their content in hemoglobin was almost equal to that of normal blood. Again, these elements were not changed at all by cold; even by exposing them to a temperature of + 2° centigrade, they did not undergo any sensible modification. During an intermission of hemoglobinuria, the process of coagulation, observed by the microscope, in a thin layer of pure blood, passed through the normal changes. There was at the time of the paroxysm, during which I observed, three successive times, a slight thickening of the fibrinous reticulum and a particular arrangement of the red corpuscles, peculiarities which recall the modifications observed in the process of coagulation among patients having inflammatory lesions of any kind. This condition of the blood was as transitory as the hemoglobinuria itself, and even more marked, as the loss of hemoglobin was considerable, it was undoubtedly dependent upon hemorrhage, and I have, moreover, noticed it in other hemorrhagic diseases, and especially in those patients attacked with the hemorrhagic diathesis and scorbutus.

The enumeration of the elements of the blood made before, during and after the paroxysm, gave evidence of only changes analogous to those found in the blood of all anæmic persons. This study and experiment was made complete after two different trials, on each occasion the quantity of hemoglobin lost was small relatively to that which the entire mass of the blood should contain. During the loss of the hemoglobin there was a slight augmentation of the white corpuscles, and a proportional diminution of the red; after two days there was a gush of hematoblasts and immature or undeveloped globules, indicating in the circulation of the blood a superactivity more marked than one would expect after a hemorrhage apparently so small.

We conclude from these researches, says M. Hayem: (1) That the anatomical elements of the blood of this patient were not sensibly altered, that the red globules are not more easily changed than those of normal blood, and that in all cases they resist quite a low temperature, for it would be impossible to admit that they meet their dissolution in the cutaneous capillary network, during the time that the patient underwent the influence of cold. (2) That the blood is not secreted naturally by the kidneys and dissolved secondarily by the urine. (3) That the blood undergoes a certain change at the time of the paroxysm, since it presents at this time, and only under these conditions, the characteristics of inflammatory blood, but these same characteristics are found not only in slight inflammations, but also in certain cases of hemorrhage, though one cannot prove an especial alteration. (4) That though these facts furnish no response to the hypothesis proposed by various authors, which supposes that the hemoglobin is dissolved in the blood before being excreted by the kidneys, it is probable that the examination would have been decisive upon this point if the patient had lost a larger quantity of hemoglobin during the paroxysms.

Translations from Russian Journals for THE PHYSICIAN AND SURGEON.
BY RALPH D'ARY, M. D., ROMEO, MICHIGAN.

DYSTHYMIA NEURALGICA: A CASE IN PRACTICE.

BY MRS. P. N. TARNOFSKY, M. D.

It is a well-known fact that many patients suffering psychically are contemporaneously affected with neuralgia. But it is only very lately that attempts have been made to determine the relation of the neuralgia to the mental (or psychical) condition, that is, in what manner the neuralgia affects the mind. Although records of cases of mental depression and melancholy occuring simultaneously with pain in various parts of the body, may be traced pretty far back in psychiatric literature, yet it may safely be said that prior to Griesinger and Schuele, neuralgia was considered merely an accidental or adventitious concomitant of mental disease, and was not believed in any way to directly influence the latter. Rather more than twenty years ago, Griesinger and Schuele at the same time pointed out the fact that in certain cases, the neuralgia caused more or less serious mental disturbance, which they called dysthymia, or dysphrenia neuralgica.

The word dysthymia was first used by Dr. Flemming, in 1844, to designate certain forms of melancholia, which by Griesinger were compared to the epileptic aura, differing from it in being permanent. The symptoms he describes as a certain feeling of discomfort in the forehead or epigastrium, depriving the patient of the ability of following any pursuit. This discomfort and the unrest caused by it is at times increased to a degree so intolerable that the patient tries to escape it by suicide, or becomes frenzied and murderously attacks anyone within his reach. He further states that "common idiopathic neuralgia sometimes causes mental derangement," and gives the history of a case.

To Schuele belongs the credit of having more especially elucidated this affection. His general conclusions are:

(1) The affection of the peripheral nerves runs parallel, as it were, to the mental derangement, exacerbations and remissions being simultaneous in both.

(2) The momentum for the onset of the psychosis in cases of pre-existing neuralgia is generally some strong emotion, fright, etc.

(3) Relapses are common in dysphrenia neuralgica.

(4) If complete recovery takes place, both affections—that of the peripheral nerves as well as of the nerve centres—cease simultaneously.

The same author states his opinion that, in view of the above, but few of the many forms of dysphrenia should be considered as idiopathic, namely, (*a*) delirium acutum, (*b*) general paralysis of the insane, and (*c*) a group of several other varieties of mental disease, the most important of which is senile imbecility.

Krafft-Ebing (1868) differs from Schuele in that he does not consider dysthymia neuralgica as a special form of mental derangement. Other authors attach varying meanings to the name dysthymia.

Dr. Tiling, in 1879, communicates eight cases of dysthymia, which he observed, and which furnish him with grounds for the following important conclusions:

(1) Dysthymia is a disease *sui generis*, which is never transmuted into other psychoses.

(2) Delirium and hallucinations do not occur in dysthymia.

(3) Dysthymia is hereditary.

(4) Dysthymic patients should be guarded against suicide.

I will now describe what I believe to be a case of dysthymia neuralgia, and then give the differential diagnosis.

Mrs. P., aged twenty-six, a tall blonde, lymphatic temperament, entered the hospital, October 23, 1880. She had lived comfortably, attending to her own household, and had always been very careful of her health. She never had had children. She had suffered for years, with neuralgic pains in the left arm and forearm and left side of the thorax; sometimes the pain was so severe that, according to her statement, she was unable to flex the arm.

In June she happened to be bitten by her sick pet dog whilst forcibly administering medicine to him. Although a veterinary surgeon categorically denied that the dog was suffering from hydrophobia, the fear of it kept her awake all night. The next day the dog was killed and the autopsy enabled the veterinary surgeon once more officially to repeat his statement that the dog had been free from hydrophobia. Nevertheless the lady's fears were not removed. On the next day her former neuralgia in the arm returned with more than usual violence. She also had excruciating pain in the head, and along the neck and ribs, almost preventing motion and causing her to cry aloud for several hours. She became very much depressed and low-spirited. This condition, in various degrees of intensity continued several weeks, the patient ascribing it to the effects of the bite. She tried country life, but in the fall returned to town in the same condition. The fear of hydrophobia, which she daily expected to manifest itself, had changed the patient's disposition. She had become indifferent to her friends, and, in fact, to everything, spending the days in bed in hourly terror of the expected outbreak. At last she was prevailed on to enter a hospital. From the one she entered she was soon sent to a second one, and thence into a third one, for mental disease. These removals confirmed her in the idea that she was a "dangerous case," and that the hospital authorities were sending her away from fear of hydrophobia.

On arrival at the last hospital she presented the symptoms described, with the addition of pain along the branches of the n. ischiaticus. Whenever the pains remitted, her mind became more cheerful and hopeful in proportion, but would again become despondent, fearful, and despairing with the next exacerbation of the pain. In this way her mental condition changed continuously and in accord with the severity of the neuralgia.

The patient frequently complained of various paræsthesiæ, as of a kind of current running through various parts of her body. When they were running through the head, she said she could distinctly feel that everything in her head moved and that her thoughts, in consequence became confused. The same sense of motion and locomotion of the internal organs was produced when she felt those currents in her thorax.

Objective examination showed that the heart and lungs were normal; the integument pale and flabby.

The following points were found painful on pressure: the plexus brachialis; a spot above the clavicle, near the attachments of the sterno-cleïdo-mastoid; and especially the cartilage of the third rib, and the anterior part of the hypochondrium (?) also: the foramen supraorbitale, the spinus processes of the superior cervical vertebræ, the region between second cervical transverse process and the mastoid process; the sulcus ulnaris, and the median nerve in the bend of the elbow. In other words pain was observed at the points where it is usually found in neuralgia of the brachial plexus, of the occiput and diaphragm, and (sometimes) of the superior portion of the n. trigeminus.

Obstetrical examination revealed only a slight inclination of the uterus to the left and a slight elongation of the portio vaginalis. Pressure in the region of the ovaries did not produce pain. Menstruation had been regular since the patient's seventeenth year.

Treatment consisted in warm baths every other day, which relieved her pain. Internally she received potassium bromide, infusum valerianæ, and afterwards argenti nitras. At first also the unguentum ex. ol. terebinthinæ was applied.

During one of the remissions of pain the patient's sensibility to the electric current was carefully tested and was found to be perfectly normal on both sides. Such also was tactile sensibility, as measured with the points of the compass.

Towards the middle of December the patient improved considerably and of the former painful spots there remained pain only in the back of the neck and the fossa ulnaris sinistra. Simultaneously also her mental condition improved. Faith in the possibility of recovery gradually returned and increased, and finally she left the hospital on the 20th December, free from neuralgia and in normal mental condition.

Differential diagnosis.—The mental condition of Mrs. P., on superficial examination might have been taken either for hypochondriasis or hysteria, or melancholia, or dysthymia.

But hypochondriasis arises without external, or extraneous motives: hypochondriacs dwell on every possible disease and apply them to themselves. Mrs. P. feared hydrophobia only. In answer to the questions whether she had ever suffered with her lungs, heart, sexual organs, etc., she always, and decidedly, denied any such affection. She did not at all manifest those changes of the will, so often noticeable in hypochondriacs. Her family history was free from any instance of hypochondriasis and, finally, her prompt recovery speaks against hypochondriasis.

Against hysteria testify its complete absence in the anamnesis of the patient, as well as the absence of hysterical attack during the time of treatment, and the preservation of an equal and normal degree of æsthesis in both halves of the body. Hysterical women generally suffer from hyperæsthesia of one lateral half of it.

Against melancholia militates the want of permanency or stability of the gloomy periods of the patient, for her mental depression was relieved or aggravated with the remissions or exacerbations of the neuralgia. Her prompt recovery also testifies against melancholia.

In favor of dysthymia we had a psychosis developed in connection with neuralgia, through the momentum of severe fright and fear, at the bite of the dog. The phychosis found expression, (1) in the change of the patient's character,—from a cheerful, careful housewife she had become careless, indifferent to her surroundings, filled with apprehensions and gloomy brooding; (2) In the anomalous changes of her general sensation, since she complained of strange currents in various parts of the body, and sensations of looseness and motion of the internal organs; (3) She was tormented by a persistent, morbid apprehension of hydrophobia, although, strictly speaking, she had neither hallucinations, illusions or delirium. The mental condition closely followed the course of the neuralgia, and as she herself stated, each new paroxysm of the latter recalled to her, and impressed on her mind, her imaginary danger, whilst with every remission of the pain her hopefulness and cheerfulness returned. Finally the psychosis disappeared simultaneously with the neuralgia.

In the casuistic of dysthymia there is a precedent—an analogous case related by Schuele: An aged woman, who had for some time suffered from neuralgia, was attacked by psychosis in consequence of fright at a clap of thunder.

The above case I believe to possess some clinical interest, as a pretty clear case of dysthymia neuralgia.—Translated in abstract, from the *E. Clin. Gaz.*

BOOK REVIEWS.

THE CARTWRIGHT PRIZE ESSAY: OBSERVATIONS WITH THE HÆMACYTOMETER UPON THE GLOBULAR COMPOSITION OF THE BLOOD AND MILK. By Frederick P. Henry, M. D., Physician to the Hospital of the Protestant Episcopal Church, Philadelphia, etc. Paper; pages, 37. Philadelphia: F. A. Davis, 1881.

Benjamin Cartwright, of Newark, has left a legacy of $10,000, $5,000 of which is for the foundation of an annual course of lectures, to be known as the Cartwright lectures (the first course of which has recently been given by Professor Bartholow), and $5,000 for an annual or biennial prize, open to the profession, for the best essay on a medical or surgical subject, presented in competition to the alumni association of the College of Physicians and Surgeons.

The essay before us is the first Cartwright Prize Essay and as such it deserves close attention. We are glad to see such an inducement, as is held out by this prize, offered to the profession, and now what of the first prize essay? Does it show a high grade of investigation? Does it bring to the profession anything new or of any special value? The author has made a number of counts of the number of red blood corpuscles per cubic millimeter of blood in health and in disease. This work has all been done before. The instruments of Gower and Hayem and Nachet, which are already well known to the profession, are used. Then nothing new has been done. The author thinks that the hæmacytometer has not been used to any extent in examining the blood of disease. He could hardly think this, if he was acquainted with the vast amount of work done in the blood of different kinds of anæmia by Hayem, and others. Hayem classifies anæmia on the number of corpuscles per cubic millimeter. Dr. Henry studies the variations in the blood at different times of the day. We copy some of his figures:

Early Morning.	Forenoon.	Afternoon.	Evening.
5,834,090	5,502,077	5,394,230	5,493,500

It will be seen from these figures that the number of corpuscles per cubic millimeter of blood decreases from morning until evening, when a slight increase is evident. This diurnal variation is attributed to changes in temperature, the higher temperature causing destruction of the corpuscles. There may possibly be something in this, but Dr. Henry forgets that the proportion of water in the blood may be greater during the day when we are constantly taking liquids of some kind. This alone is sufficient to upset his theory of the nice relation between temperature and destruction of corpuscles. In discussing the origin of urinary pigments, the author evidently is ignorant of the view now held almost universally by physiologists and indeed we may say that it amounts to an established fact, which may be summed up as follows:

(1) The bilirubin is formed from hemoglobin.

(2) By combination with the nascent hydrogen formed in intestinal digestion, the bilirubin is converted into urobillin, or urinary pigment.

Evidently Dr. Henry knows nothing of Hoppe-Seyler's method of weighing the moist corpuscles or he should mention it in speaking of the various methods of determining the globular richness of the blood. We dare say that Dr. Henry has been confined to English and translated works in studying the literature of the subject. We question if he has seen the article by Heidenhain in the "Handbuch der Physiologie." We doubt even if he is familiar with the best English; for instance, Gamgee's recent work.

We hope that the next Cartwright Prize Essay will show more originality of research or at least a better acquaintance with the literature of the subject on which the essayist attempts to treat.

THE HOME HAND-BOOK OF DOMESTIC HYGIENE AND RATIONAL MEDICINE. By J. H. Kellogg, M. D., Member of the American Association for the Advancement of Science; the American Public Health Association, etc. Good Health Publishing Co., Battle Creek, Michigan, 1881. Leather; pages, 1568.

The objects of this work are so admirably stated in the preface that we here reproduce them:

(1) "To present in a popular and condensed form the latest and most reliable information of the subjects of anatomy, physiology and hygiene. Considerable space has been devoted to the description of the structure and functions of the various organs of the body; (*a*) because these subjects lie at the very foundation of all scientific medical knowledge; (*b*) because they have been universally neglected in works of a similar character.

(2) "To call especial attention to the causes of disease and the best means of prevention. It is universally admitted at the present time that preventive medicine is of far greater impor-

tance than curative medication, and many of the most eminent members of the profession are devoting themselves exclusively to this branch. It has been attempted to make this work the most complete on this subject of any popular treatise published.

(3) "To supply information respecting simple measures of treatment that can be employed by persons of ordinary intelligence in the absence of a physician, when a physician cannot be obtained at once, or need not be called, as in cases of accidents and simple diseases or injuries which require only good nursing and the employment of simple remedies; and also to render people competent to second the efforts of a wise physician in alleviating suffering and combating the fatal tendencies of disease.

(4) "To impress the importance of giving prompt attention to the first departures from health, and by controlling small beginnings to prevent the inroads which result from a neglect of the employment of prompt and efficient measures.

(5) "To give a sufficiently clear outline of the nature of disease and of the most approved methods of treatment to enable the reader to discriminate between the wise and reliable physician and the charlatan."

A careful examination of the work convinces us that Dr. Kellogg has succeeded admirably in the very praiseworthy endeavors as set forth above. If all could read this work and understand its teachings the dupes of the quack would grow wonderfully less in number.

MEDICAL ELECTRICITY: A PRACTICAL TREATISE ON THE APPLICATION OF ELECTRICITY IN MEDICINE AND SURGERY. By Roberts Bartholow, A. M., M. D., LL. D., Professor of Materia Medica and Therapeutics in the Jefferson Medical College of Philadelphia, etc., etc. One volume, octavo, with 96 illustrations; pages, 260. Philadelphia: Henry C. Lea's Son & Co., 1881.

There has been much dissatisfaction throughout the profession with our works upon electro-therapeutics. Some have been written by specialists who have not made the explanations plain enough for the non-specialist to follow. Others are imperfect; while others yet have been written by men who make a "hobby" of electricity and do much harm by over-estimating its value. Dr. Bartholow is a very prolific writer and a very interesting one. He is broad in his views and while he avoids the excessive enthusiasm of the specialist, he writes with sufficient vigor to be attractive. The work is divided into six parts. The first part, "Electro-Physics" has been written with the special object of making the fundamentals familiar to those not acquainted with the subject. In the second part, "Electro-Physiology," the rudiments of this science are explained clearly and with sufficient fullness. This is a part of physiology about which one-half the professors of physiology in our medical schools know absolutely nothing. The third part is devoted to electro-diagnosis, and the fourth, in which the value of the work lies, to electro-therapeutics. Then follow sections upon electricity in surgery and thermo-electricity. We think the work the best on the subject yet offered to the general practitioner. While this is true, the work is not perfect. It adds nothing to the appearance or value of the volume to insert so many cuts of different make of apparatus. It detracts in our mind, as it has the appearance of debasing a scientific work to the level of an advertising catalogue. Again there are many inelegancies of expression which cannot be avoided by the author, who writes so much that he must write hurriedly. These imperfections are of but little importance and will doubtlessly not appear in future editions.

THE APPLIED ANATOMY OF THE NERVOUS SYSTEM, BEING A STUDY OF THIS PORTION OF THE HUMAN BODY FROM A STANDPOINT OF ITS GENERAL INTEREST AND PRACTICAL UTILITY DESIGNED FOR USE AS A TEXT-BOOK AND A WORK OF REFERENCE. By Ambrose L. Ranney, A. M., M. D., Adjunct Professor of Anatomy and late lecturer on Diseases of the Genito-Urinary Organs, and on Minor Surgery in the Medical Department of the University of the City of New York. Cloth; pages, 500, with numerous illustrations. New York: D. Appleton & Co., 1881.

This is the only work of the kind with which we are acquainted. It consists of a course of lectures given to the medical stndents of the University of the City of New York during the session of 1880–81. The colloquial style of the lecturer is retained in the text; we agree with the author in thinking this an advantage. The author first describes the Anatomy and, to some extent, the physiology of the nerve, and then discusses the various diseased conditions of the nerve. In other words the author endeavors to make plain the anatomical and physiological facts which must be understood before pathological conditions can be comprehended. We are glad to see work done in this direction; for too often the teaching of anatomy and physiology is completely isolated from that of pathology. The student hears lectures upon all these subjects, but no one points out to him the connection between them and he fails to truly comprehend either of them. We pronounce the work a very valuable one and hope to see it introduced as a text-book in our medical schools.

SCRIBNER for September. Century Company, 743 Broadway, New York. Subscription price, $4.00; single numbers, 35 cents.

This number of Scribner's opens with a spirited and readable sketch entitled "A Boy in Gray." In this sketch we get a glimpse at the everyday life of the private soldiers who wore the gray. Albert Stickney's valuable paper, "The People's Problem" is continued in this number. The chief illustrated articles are: "A Russian Artist," "Stars of the Sea," "The Coniferous Forests of the Sierra Nevada," and "The Society of Decorative Art."

GLAUCOMA FROM MENTAL WORRY. By Leartus Connor, M. D. Reprint from *Detroit Lancet.*

This is an interesting and valuable contribution to the literature of the subject.

SELECTED ABSTRACTS.

TREATMENT OF COMPOUND FRACTURES AND WOUNDS OF JOINTS BY GLYCERINE AND CARBOLIC ACID.

Surgeon Griffin (*London Lancet*), recommends the application of lint saturated with glycerine and solution of carbolic acid in the above named injuries. The following out of a number of cases which he relates, shows the method of using and the results obtained:

The next patient was a tradesman who had jumped out of a cart while his horse was running away. He in consequence sustained a simple fracture of the fibula and a compound dislocation of the foot outwards, the lower extremity of the tibia being driven through the skin, the sock, and the elastic of his boot against the ground, and the internal malleolus broken off. When he had been conveyed home the bone was still protruding, and the wound could not be got at until his boot and sock had been cut away. The bone being covered with dirt from the road, was now carefully cleansed, and with the aid of two other surgeons, who had been sent for at the same time as myself, and arrived soon after, an attempt to reduce the dislocation was made. We did not, however, succeed in effecting the reduction until a slice of bone had been sawn off the projecting end of the tibia. After the reduction, the limb was placed on an iron back splint, with two wooden side splints duly padded and suspended from a cradle, the apparatus being of the kind used at Saint Bartholomew's Hospital, in the wards of Sir James Paget when he was surgeon there, and supplied by Ferguson, the surgical instrument maker. About three hours after the accident, I syringed out the ankle-joint with a solution of carbolic acid in thirty-nine parts of recently boiled water, and then, after cleaning round the wound, applied a pad of lint of six or eight thicknesses, saturated with glycerinum acidi carbolici, taking care that the upper layers were of sufficient size to project some little way beyond the wound, so as to exclude air effectually, in case of the patient becoming restless. This was then secured by a bandage. The next day all the upper layers of lint were removed, soaked as before, and then reapplied, except the three next the wound, which were left undisturbed. Then over the lint I put a large piece of carbolic acid plaster, and secured it with a bandage. This mode of dressing was repeated night and morning for several weeks, during the whole time not more than about a tablespoonful of discharge escaped from beneath the pad of lint. This discharge was of a pink color, opaque, and nearly solid. The bowels were confined, and pain and straining relieved with tincture of opium, for about a fortnight. After this the patient, who ate heartily his ordinary diet of meat, etc., the whole time, used to sit up in bed and write letters, and keep the accounts relating to his business. After six weeks I gradually reduced the amount of the carbolic acid by adding more glycerine, and when the wound was nearly healed I used spermaceti ointment. He ultimately made a good recovery, and can walk considerable distances with the aid of two sticks.

ON THE TREATMENT OF IMPETIGO LARVALIS BY POWDER OF IODOFORM.

Although iodoform has long been used with advantage in the treatment of ulcers of various kinds, more especially syphilitic ulcers, I am not aware that it has been employed in any other kind of chronic skin disease. The idea, however, happened to occur to me to employ it in impetigo larvalis—by which name I mean the mattery, yellow-scabbed patches which occur on the faces of children and young adults. I was led to this idea by noting that the raw surfaces concealed by the scabs of impetigo have, although they are not ulcers, certain points in common with that class of ulcers which iodoform is specially successful in healing, namely, that they present a soiled false-membrane-like surface, which discharges copiously a milky pus, and that this surface has to be succeeded by a florid, clean, raw-beef-like surface before healing. My experiments have been conducted by removing the scabs and drying the sores with rags, and then dusting them over with a mixture of iodoform (in very fine powder) and of starch powder in equal parts; and then, as the surface improves, I use iodoform powder undiluted. Very rapid improvement takes place under this treatment. The mere dusting over of the raw surfaces with the powder does not of itself suffice, since if that alone be done the surface speedily dries up again; that is to say, a thin, hard, dry scab is immediately formed, and this cracks, and so produces an uncomfortable tense condition of the surface which is not only extremely irksome to the patient, but also highly unfavorable to rapid healing. I accordingly, in my earlier experiments, coated the powdered over surface with a film of almond oil laid lightly on with a camel-hair brush; but this plan, which succeeds very well in the case of ulcers, does not agree equally well with the excoriations of impetigo. What I find to agree very much better than the oil is a film of glycerine, under which healing takes place much more rapidly. The conditions that have to be observed are these: (1) The scabs are to be softened by bathing them with warm soap-and-water, and then completely detached and removed, and thereupon the raw surface is to be gently dabbed dry; (2) the iodoform is to be in very fine powder, and freely dusted on; (3) a layer of glycerine is to be lightly laid over it; (4) the process should be repeated, if possible, every two hours by the patient himself, or if a child, by its nurse. Under these conditions the disease, in many instances, within a day or two exhibits a very remarkable improvement, and speedily becomes healed. A moderate dilution of the iodoform with starch powder will render it quite a comfortable application in cases where it would otherwise cause irritation.—Balmanno Squire, M. B., *British Medical Journal*, of May 14, 1881.—*Edinburgh Medical Journal.*

ECZEMA PALMARE.

Dr. Finny continues his excellent "Practical Notes on some Local Forms of Eczema," and deals now with that affecting the palm. He agrees with those who believe that scaly diseases of the palm may be due either to eczema, psoriasis, or syphilis, and the diagnosis is at times by no means easy. It occurs, though by no means common, usually in persons over thirty, and more frequently in men. Irritating occupations seem to induce it, as digging, bottle-washing, etc. Sometimes no local cause is discoverable, and then it may be the expression of a gouty diathesis brought out by worry and anxiety. The whole palm may be involved, or but part, then more often confined to the ball of the thumb and adjoining natural folds. It may be found on both hands, but if so, one palm is more extensively and deeply engaged than the other. The epidermis becomes dry, cracked, fissured, and scaly, and more or less thickened. Any extension of the hand tears open the fissures and causes much pain. Accompanying this there is burning, tingling, or itching of a very severe character, and this, being worst in the evening, prevents sleep, and renders the patient haggard and nervous. In diagnosis, since in many instances history fails us, syphilis must be eliminated by other means. Such are the "coppery" hue of the eruption, the "earthy" tint of the complexion, absence as a rule of tingling and itching, so common in eczema. The syphilitic eruption, too, starts usually from a centre, spreads circumferentially, and may heal in the centre. In treatment some cases improve under the constant use of india-rubber gloves, followed up by an ointment of ammoniated mercury, twenty grains to the ounce. The oleate of zinc diluted with vaseline answers best in moderately chronic cases where the thickening is not extreme. Where treatment threatens to be tedious owing to the extreme density of the tissues, or when constant applications of ointments or india-rubber gloves are impracticable, a more rapid solution of the thickened epidermis is necessary prior to using curative ointments. The best solvent is potash, which may be employed as a lotion, applied on lint under gutta-percha, in the strength of two to four drachms of liq. potassæ in eight ounces of water. Care must be taken not to overreach the object in view. During any treatment the hand should be kept flexed, to avoid tearing open the fissures which are in process of healing.—*Dublin Journal of Medical Science*, for January, 1881.—*Edinburgh Medical Jorunal.*

TRICHINA-LIKE PARASITES.

To microscopists who are endeavoring to ascertain the various habitats of trichinæ, a useful word of warning has been given by M. Mégnin in a paper read before the Société de Biologie, in which he points out that many minute encysted worms are met with which are not trichinæ, although so closely resembling them as to have deceived many observers. The supposed discovery of trichinæ in the rootlets of beetroot, proved to be a mistake by Virchow and Kuhn, is a striking instance of this sort. Lagenbeck described trichinæ in the intestines of earth worms, but Kuhn showed that the parasite is quite distinct from the trichina spiralis. Merlan and Tigri thought they had found trichinæ in the lungs of sheep, but Delpech showed that these were merely the embryos of strongylus filaria. Cobbold has stated that the trichina is common in the hedgehog. Mégnin is convinced that this is an error, and that the worms described are merely the encysted larvæ of the spiroptera clausa. He showed preparations of an encysted nematoid worm, which might easily be mistaken for the trichina, but pointed out that the former differs in having a papilla at its mouth, and the anus is not terminal. Siebold described as a trichina a worm found in cysts in the peritoneum of the grey lizard and other creatures, but Mègnin asserts that this also is the larva of a spiroptera (S. abbreviata), the adult individuals of which are abundant in the intestines of the same animal. An encysted spiroptera still more strikingly resembling the trichina has been found in the muscles of the frog. Very similar, but larger, encysted worms of the same genus have also been discovered in the subcutaneous tissues of a bird, the manchetes pugnax. —*London Lancet.*

THE

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ORIGINAL ARTICLES.

REPORT OF A CASE OF GENERAL PARESIS.

BY HENRY L. JOY, A. M., M. D., MARSHALL, MICHIGAN.

The statutes of the State of Michigan make every physician a medical expert. When a citizen begins to "cut up" and rave, so that he is a terror to his family and neighbors, an application is made to the Judge of Probate for an inquisition. The Judge issues a summons to two physicians, to examine this crazy fellow, and, when these experts have confirmed the verdict of the neighbors, the crazy man is sent to an insane asylum for treatment. The family and neighbors are gratified that their judgments have been ratified and now the asylum is the proper place for him. Had it been a case of poisoning, requiring an intricate chemical analysis, the stomach, and perhaps the whole alimentary canal would have been sent to Ann Arbor for examination; but when it comes to a case of mental alienation the law throws over us the mantle of wisdom and we take our fee just as any expert ought to. Who can blame us if the law says we may? But, for fear the world's people may see through it, one of these days, and wonder why they should be taxed for such opinions and propose a change in the law, requiring a special study of those subjects, requiring expert testimony, on the part of the expert, would it not be well to post up so as to head off such a change in the law? A case has recently come under my observation where there was decided mental alienation and, in consequence, a large amount of property was lost and wasted without the intervention of the law to restrain it. From the fact that the individual had no wife, business partner, or indeed any one who, seemingly, had a right to interfere with his business matters, the law was never called into action and he was allowed to indulge the exaltations belonging peculiarly to this form of insanity, even to the loss of hundreds of thousands of dollars, notwithstanding the frequent testimony of his neighbors that he was acting like a crazy man. As the intent of the law is to save property as well as life it may be well to report this case so that another case, similar, may be recognized before a fine property is lost beyond recovery. In this case the confusion of eccentricity with insanity was the cause of the non-recognition of the real disease. An expert might have said, long ago, had he been called, "those physical symptoms indicate an incurable cerebral disease."

H. J. P. was sixty years old when he died. He came to Michigan when he was twenty-seven years old, where he continued to reside, unmarried, until his death in January, 1880. He engaged in mercantile business, and also extensively in the business of manufacturing flour and of banking, all of which he prosecuted with success, and as early as 1867 had, by his own exertions, accumulated a large amount of property. His industry and peculiar dash in business matters soon made him a man of mark in the community, and gave him an individuality, that was so prominently stamped upon him that it was never erased. Striking out independently, with a strong mind and a sound body, and wonderful industry, he soon became rich, and as he became rich his excessive individuality marked him as an eccentric man by all who knew him. He was a high-minded man—would meet every engagement, and was strenuous that every engagement should be met by others—rarely used profane language previous to the great change that came over him about ten years before his death. Every enterprize he engaged in he prosecuted vigorously till he accomplished the end he sought. He was eccentric, and his eccentricity consisted in his mode of doing business in a dashing manner rather than the eccentricity of one who deviates from the ways of his fellow men from weakness of judgment, love of applause and desire of drawing upon himself the attention of others. He was reticent in business matters, always temperate in the use of liquors, though somewhat free in the indulgence of his animal instincts.

In the winter of 1867 he met with a great loss by the burning of a large flouring mill. This loss produced a mental explosion with him, or more technically, a cerebral hyperæmia, which manifested itself by an alteration in his character and actions. He immediately left his business, went east and remained there some six months, leaving his business in a confused condition and, while away, making himself notorious by the indulgence of his animal propensities. On his return his character was completely changed, and his mode of business was entirely different. His schemes were more exalted and marked by an excessive egotism. The reticence of a former day was lost in the magnitude of his great plans; he would conceive great projects, enter upon them with energy and then abandon them with great pecuniary loss and start upon some other wild scheme with like results. He was going to make his water power run a cable through the whole city, so that attachments could be made, in any part of the city, for any mechanical purpose, notwithstanding, his water power was used to its full extent. He was going to start a paper mill and have it so constructed that he could run a train of cars through it; and he was going to manufacture fifty tons of paper per day, using the same water power.

He had a small farm of about three hundred acres which he represented to the railroad company as containing three thousand acres in extent, on which he made plans for constructing elevators for his own use, expecting to raise ten to twenty thousand bushels of wheat, and he wrote letters to the railroad officers, requesting the construction of side tracks, and he calculated having a steamboat on the river to convey his wheat to the elevator. And this wheat was to be consigned to his own house in Paris. He completed a large spring factory and then abandoned it, losing all the machinery and materials.

He also commenced extensive car works with like results. His splendid mansion, where he lived, not being warm enough for him, he laid a foundation about it for the purpose of building another house over it and then filling in the space between so as to keep out the air. He projected the idea of purchasing seventy thousand acres of land in Texas and corresponded with hundreds to ascertain the cost of boarding men who were going in companies to view it, and attempted to secure special rates for their transportation.

His egotism being unbounded no remonstrance from his friends would be listened to, they would only smile at his foolishness, and some would say "he is crazy" and others would say "this is only the eccentricity of the man." During these mental exaltations his business went on with the assistance of clerks; his mortgages with their interest were collected and new mortgages taken, and his banking business went on.

Apparently he would understand the minutiæ of money lending, but, as the sequel proves, his capacity was only an automatic working of the mind in that form of business, after long training previous to his mental alienation. He became less social in his manner and less inclined to talk. In conversation he would often break off from one subject and run on to another totally different one without any connection or cause, so that he showed lack of continuity of thought. He often imagined at night that storms were coming up, when the sky was clear, and there were no signs of one—and he had other hallucinations of the same kind.

Synchronously with his fickleness of character and exaltations in business matters there were physical changes quite manifest. On his return from the east (1867) he began to complain of pain and fullness in his head, and one eye disturbed him very much—so much so that he wore a shade over it—the lid of his left eye seemed to droop and there was a want of symmetry between the two irides of the eyes, they did not respond equally to the stimulus of light—the left iris did not close as readily as the right so that the pupil of the left eye was a little larger than that of the right. Very soon after this his hearing became impaired (1871), and it continued, progressively, till at the time of his death, it was almost impossible to converse with him. And very near this time he lost his freedom of speech—there was a tremulousness of the upper lip, and a thickness of the tongue, and such a want of co-ordination of the muscles of speech that it was difficult at times to understand him, and for several years previous to his death he would have the expression and give such sounds, when attempting to speak, that one would suppose he was about bursting out into a fit of crying. He also manifested an impairment in the use of his hands, having lost the finer power of manipulation and freedom in writing. And his gait changed—having a straggling and unsteady walk, bending forward and inclining to walk upon his toes with a little quickness of motion. While these physical symptoms were being developed the exaltations of the first three or four years of his mental change (1875 to 1880) began to abate and he settled down into a routine of business as his vast estate demanded, thinking he was doing business well, when in fact that which was conducted by himself was managed at great loss. His countenance began to change, his eye lacked that soul that belonged to him in an early day, and his mouth became broad, straight, unchiselled and devoid of its usual curves, giving him a sodden and expressionless look. The boys would laugh at him as he walked the streets, and men lost their respect for him.

Notwithstanding these physical and mental manifestations he passed in the community *by many* as a sane man, or at least as a man having marked eccentricity. Many physicians as well as laymen were deceived alike; but a postmortem examination verified the truth that *eccentricity* was not the cause of death as the following details of the postmortem will show.

Postmortem.—He was thin in flesh, weighing when well about one hundred and forty-five pounds, but at death not more than one hundred and fifteen pounds. Besides the emaciation the cadaver was noticeable for its manifest bloodlessness and a remarkable collapse of the abdomen.

The head was first examined, and nothing abnormal was found in the calvarium or dura mater. The arachnoid contained an excessive amount of turbid serum; the pia mater was easily detached from the surface of the brain. No marked atrophy of the external convolutions, except a depressed spot quite noticeable in the center of the parietal surface; the walls of the blood-vessels in the base of the brain were healthy and the vessels themselves were unobstructed in their caliber. The left side of the pons varolii was larger than the right, producing marked asymmetry, and the cranial nerves were all normal in appearance. A moderate amount of serum was found in the cavities.

No foci of disease were any where discovered in the substance of the brain, nor any abnormal appearance except in the right occipital lobe where the brain tissue was manifestly toughened or hardened. The cut surfaces of the brain were noticeable for the condition of extreme anæmia. Sections of the medulla and of the pons were made, and though not symmetrical in exterior view no disease nor organic change of a pathological character was found on either side by which to account for the want of symmetry.

About five inches in length of the spinal cord was taken from the upper dorsal region and the cord so removed, and its enveloping membranes were healthy in appearance except a manifest atrophy of the gray matter. The thoracic and abdominal viscera were all examined one by one and no abnormality was found.

Microscopical examination of the brain and spinal cord was made February 18, 1880. Sections from frontal and right occipital regions of the brain (the latter having been taken from the hardened portion before mentioned) were carefully prepared and examined. In some sections of the frontal lobe nothing abnormal was found, while in other sections from the same part of the brain the tissues were degenerated, the characteristic cells having lost their filamentous processes and nothing remained within the cells in many cases except the cell nucleus and a little granular matter. In the sections from the hardened portion of the right occipital lobe the cell structure was in the main fairly preserved, except that the filamentous processes were almost wholly wanting.

The sections from the spinal cord revealed at the peripheral part of the cord a remarkable degeneration of the nerve fibres, in many cases complete, while in other cases the axial cylinders alone remained. This degenerated tissue consisted of a mixture of fine fibres and granular matter; the blood vessels being enlarged and their coats thickened. The nerve cells of the anterior horns were extensively degenerated, being lessened in number, and in very many cases entirely destitute of processes.

VALUE OF SYSTEMATIC TREATMENT WITH NITRATE OF SILVER IN TRACHOMA AND ITS COMPLICATIONS.

BY E. N. HAWLEY, M. D., NORWALK, OHIO.

Case I.—C. G., aged four and one-half months, has been afflicted with sore eyes since four days old. First appearance was as ophthalmia neonatorum. Acute inflammation with purulent discharge continued about three weeks. Since then there has been a mild discharge, redness of eyes and almost complete blindness. Examination showed a granular condition of the lids of both eyes. On the right eye there is an ulcer involving nearly the whole of the cornea with considerable opacity. In the left eye a complete leucoma shuts out all light, no part of the iris visible, and a small ulcer of the cornea. General health poor, child lies listless, and is practically blind. Has used all sorts of domestic remedies; as poultices, turpentine, camphor, molasses, white vitriol, smart weed, etc., etc. Has been taken to a distinguished oculist of Cleveland and had prescriptions from all the local doctors, but with no improvement. No applications were made to the lids directly by them.

July 12: Began applying solutions of nitrate of silver, varying in strength from three to five grains per ounce of water, by everting the lids and applying directly, rinsing well afterwards. In addition used sulphate of atropia one-fourth grain per ounce dropped in each eye three times per day.

These applications continued daily up to September 11. Condition of eyes then as follows: Lids nearly normal in appearance, ulcer of right eye healed, leaving but a small cicatrix in upper outer quadrant of cornea permitting distinct vision; *left* eye, ulcer healed, opacity very much diminished in size, exposing the outer zone of the iris and allowing some light to enter the eye.

General health very much improved.

Case II.—G. E., aged three, has had inflamed eyes for nearly two years. Obliged to keep him in a darkened room for a year past. Had undergone all sorts of treatment; as, local applications of cod liver oil, molasses, tea, poultices, salt water, and a host of other domestic remedies. Has taken internally, prescriptions from spiritual and Indian doctors, and during the last six months from a homœopathic doctor.

Examination showed trachoma of the lids, blepharospasm, great photophobia, ulceration of both corneæ, with considerable haziness.

July 20: Began applications of nitrate of silver, strength varying from three to five grains per ounce, with sulphate of atropia one-half grain to the ounce. This treatment was continued daily. In less than two weeks the child was able to go out of doors in the open sunlight, with no shade for his eyes; not even a hat.

Blepharospasm and photophobia nearly disappeared. By September 10, lids about normal, ulcers healed, corneæ clear and vision good, but little opacity remaining. Treatment discontinued.

DIFFICULT LABOR FOLLOWED BY VESICO-VAGINAL FISTULA.

OPERATED UPON BY DR. W. H. SMITH, OF SAINT CLAIR, MICHIGAN.
REPORTED BY F. B. SUTTON, M. D.

July 3, Dr. W. H. Smith was called upon to attend Mrs. G., a primipara, in childbirth. She had been in labor twenty-four hours. An examination revealed a small pelvis, the woman being a dwarf, head presenting and funis prolapsed. Dr. S. informed the woman attending that the child was dead and probably could not be delivered without instrumental interference. At Dr. S.'s request another physician was called who labored with the case ineffectually several hours, when he departed, advising Dr. S. to give an opiate sufficient to give the woman a rest, thinking that labor would then progress to a satisfactory termination. Accordingly morphia was administered. The pains returned after a few hours, but ineffectually. After the lapse of about sixty hours after pains first began Dr. S., believing the woman's strength was becoming too greatly exhausted, and that longer delay was unjustifiable, resorted to craniotomy and removed the child. The woman made a good recovery and in a week was about the house. After a week's time she became unable to hold her water. Dr. S. ordered her to bed and introduced a catheter with instructions to have it kept open, and to have the vagina syringed out. These instructions were not complied with. The catheter was removed after a few hours and the woman left her bed. Excoriation of the parts followed but were controlled with a wash of alum water.

Here was the usual history of protracted labor. Ignorant or vicious persons might lay the blame of the fistula to the use of the instruments. If such were the case the escape of urine would not have delayed a whole week's time. Having consulted with Dr. S. July 31, in a case of fractured pelvis, he requested me to assist him in the treatment of the fistula. Accordingly we visited the woman August 15th, and I administered a mixture of chloroform and ether. Dr. S. made an examination and found the opening situated at the point of union of vagina and cervix uteri. The womb was seized with a vulcellum and drawn down, threads were passed through the neck and placed in the hands of an assistant. The edges of the fistula were pared and united by means of wire sutures. The bladder was syringed out, a Sigmoid catheter introduced and the patient put to bed. Some nausea and vomiting followed. This soon subsided. The nurse was instructed to examine the catheter every three hours and keep the stools liquid by means of castor oil.

August 17: I was again called to visit the patient with Dr. Smith. An anæsthetic was again administered and the sutures removed. The wound was found to be completely united in spite of the bladder having been twice allowed to become so full as to be painful to the patient.

EDITORIAL BRIEFS.

THE *London Pharmaceutical Journal* pays the following compliment to the department of pharmacy of the University of Michigan:

"In *New Remedies* for August, page 242, there is published a list of questions given at the recent examination in the school of pharmacy of the Michigan University, which shows that the student of pharmacy in this country cannot reasonably complain of the severity of the examinations of the English Board. Candidates even for the major examination are scarcely expected to answer such questions as the following:

"'Give the construction of a common objective?' 'Give the (microscopical) distinctions of black-pepper and coffee?' 'What are the chief physiological and therapeutical effects of belladonna?' 'What are its effects in poisonous doses?'" Candidates are also expected "to be able to recognize any crystal, perfect or imperfect, compound or simple, in any of the six systems, and to answer any questions regarding them."

"It seems obvious that the fact of pharmacy forming a branch of university education not only increases the value of the examinations but gives to chemists in the United States that higher standing with the medical profession and the public generally, which is felt to be desirable in this country."

THE DEATH OF PROFESSOR WILLIAM WARREN GREENE.—To many of our readers the news of the death of Professor Greene comes as that of a personal friend. Returning from the International Medical Congress in London, where his skill as an operator and his ability as a speaker had been fully recognized, Dr. Greene was stricken with uræmic poisoning and was buried at sea. We publish elsewhere in this number his remarks on Listerism made at the congress.

Dr. Greene was born in 1829 at North Waterford, Maine. His father was a farmer and Dr. Greene was not permitted by surrounding circumstances to take a full literary course. He studied, however, at Bethel and at Bridgton Acadamies. He graduated in the department of medicine and surgery of the University of Michigan in 1855. After graduation he practiced his profession for a while in Maine and later in Pittsfield Massachusetts. In 1861 he was elected Professor of Theory and Practice in the Berkshire Medical College, and the following year he was transferred to the chair of surgery. He has occupied the chair of surgery at different times in the University of Michigan, Long Island College Hospital and Bowdoin College. As an operator Dr. Greene was bold and skillful and as a lecturer he was fluent and remarkably clear. To him belongs the credit of establishing the fact that goitres could be successfully extirpated. When he first performed the operation, it was denounced as unjustifiable by some of the most eminent surgeons. But his successes convinced them of their error. His writings have attracted the attention of the profession abroad as was evinced by the high esteem in which he was held by colleagues in the surgical section at the late congress.

TOO EASILY DUPED.—*The Michigan Medical News* claims that Drs. Palmer, Frothingham and Maclean are too easily duped, as shown by their giving certificates to Dr. Joy. We have the same complaint to make of the above named gentlemen. This is not the first time that they have been duped. A few years ago there came to Ann Arbor one, J. J. Mulheron, who claimed that he had been wronged by a partner, and who desired money to start a reputable medical journal. These men, Drs. Palmer, Frothingham and Maclean, put their hands into their pockets and gave Mulheron money. They took him before their classes and in the belief that he would comply with his promise in starting a reputable journal, they obtained many subscribers for him. Again, a few years ago there came to Ann Arbor another, E. Halsey Wood, who claimed to have discovered an infallible cure for cholera (though so far as we know he had never seen a case of cholera). He desired to go to France and present his views to the French Academy of Science. He wanted to go before the medical class and ask the students to make a purse for him to accomplish his desired object as he did not have money enough to carry him to France. This request was mildly refused. Wood was treated with pity because his nervous system was believed to be a little out of gear. After this Wood wrote to Dr. Palmer asking to be allowed to lecture before the students. This request was refused in the same spirit as the other had been. Now Mulheron's journal started, Wood is one of its chief contributors. He publishes in the journal the lecture which he had desired to give—a fit receptacle for such nonsense. There is a great similarity between Mulheron and his chief contributor, Wood. And we think that Drs. Palmer, Frothingham and Maclean have been duped sufficiently often to know better. They are to a greater extent responsible for the filth which Mulheron and Wood disseminate than they are for the frauds of Wagner & Co.

President Garfield's Wound.—The autopsy has shown that the wound was necessarily a fatal one. The ball after fracturing the right eleventh rib and shattering the first lumbar vertebra, driving a number of small pieces into the adjacent soft parts, lodged just behind the pancreas about two inches and a half to the left of the spine and behind the peritoneum where it had become completely encysted. The immediate cause of death was secondary hemorrhage from one of the mesenteric arteries adjoining the track of the ball. The channel, which had been supposed to be that produced by the ball, was found to be due to the burrowing of pus. While the postmortem revealed the fact that the surgeons had made a mistake as to the location of the ball and that Professor Bell's instrument was equally at fault, it showed that no treatment could have resulted in saving the life of our beloved President. Those physicians, who, never having seen the patient, knew all about the location of the ball and were so ready to give to the newspapers their views on the matter, may now realize what asses they were making of themselves. Dr. Bliss may also now realize that his presumption as to his complete understanding of the case has done him no good and been no honor to the profession. As before stated in this journal, when Drs. Agnew and Hamilton were called into the case we were satisfied that the best possible would be done. The result has proven this to be true. The fact that the President with such a wound should be kept alive as long as he was is a triumph of which the profession may justly be proud.

There is one point upon which we cannot refrain from making a brief comment. Dr. Bliss is one of a class which is becoming too numerous in the profession. This class seek after cheap notoriety. They have neither the brains nor the application to build up a solid reputation. They are ever seeking for some special case upon which they are to make a name. When President Garfield was shot, Dr. Bliss acted unprofessionally and ungentlemanly in order to obtain charge of the case. He doubtlessly hoped to make a reputation upon his treatment of so illustrious a patient; and the result has been, as it must ever be with such shallow minded men, he has made himself an object of ridicule. If the wound had been less dangerous and had the case terminated favorably, Dr. Bliss would have received no more credit from his profession than if his patient had been an obscure person with a similar injury. In other words the credit done him would have been estimated by the profession by his skill in treatment and not by the rank of his patient. Members of our profession should be less eager to see their names in sensational reports, and more anxious to see them in connection with thorough, honest investigation, which is likely to promote the welfare of mankind and the honor and dignity of the profession.

CORRESPONDENCE.

THE MICHIGAN MEDICAL NEWS AND JOY'S ELECTRICAL DEVICES.

In the last number of THE PHYSICIAN AND SURGEON I published a card, which, with the editorial remarks accompanying it, ought to have been sufficient to settle this matter, but as *The Michigan Medical News* has again renewed its charges, and as my style is so pleasing to Dr. Mulheron, and my ingenuousness makes such an impression upon him, I have thought it best to again go over the ground, and also to show the true inwardness of this attack on the medical faculty by the *News*.

The facts which have called forth this discussion are briefly as follows:

Sometime in 1880, Dr. Douglas A. Joy, an assistant to the professor of chemistry in the medical department of the University, invented an electrical belt, for use in the treatment of a patient by Professor Maclean. The belt worked satisfactorily and Professor Maclean expressed his appreciation of the construction to Dr. Joy. A while afterwards Dr. Joy secured from Professor Maclean a certificate as to its efficiency, and another from Dr. Langley, professor of chemistry and electro-therapeutics, certifying as to the scientific construction of the belt. He afterward secured a certificate from me, under the plea that it would aid him in making arrangements with a manufacturer, who was willing, if it was a genuine thing, to invest some money in the manufacture of the belt and give Dr. Joy something for the device. At his request I examined a straight belt, the only one shown me, and the only one I supposed the doctor had constructed or contemplated, and certified to the fact that it would generate a mild current of electricity, and would be useful where such a current was of benefit. Dr. Joy also obtained a similar statement from Professor Palmer. The following are copies of these certificates:

UNIVERSITY OF MICHIGAN, November 3, 1880.

DR. D. A. JOY: *Dear Sir*—I have seen and tested the Galvanic Belt designed by you. It is refreshing to find at least one of these belts constructed in accordance with scientific principles. In your construction there are provisions which will ensure a powerful and steady current, making it in my opinion the best Galvanic Belt in the market.

Yours truly, JOHN W. LANGLEY.

I have no hesitation in recommending Dr. Joy's Galvanic Belt, as I have had practical proof of its thorough efficiency.

DONALD MACLEAN.

I have examined Dr. Joy's Galvanic Belt and find it a convenient and efficient instrument for maintaining and applying a mild and continuous current of electricity. It is, of course, useful wherever such a current is of benefit.

G. E. FROTHINGHAM.

I have examined the belt referred to in the preceding certificates, and find that it produces, when properly used, a mild continuous galvanic current, and it will be useful when such a current is needed. A. B. PALMER.

Dr. Joy had been for several years favorably known to the members of the faculty as a student and assistant in chemistry; was the son of one of the oldest, and as we supposed, one of the most respectable regular physicians in the State, and we had no suspicion that an improper use of these certificates would be made. No patent was contemplated when the certificates were given. The giving of similar certificates for proper things is a common practice. Electricity is a recognized therapeutic agent, and no offense of the code, or deception was thought of when the certificates were given. The code forbids the giving of "*cèrtificates attesting the efficacy of patent or secret medicines*," but no other, and Dr. Mulheron shows his stupidity when he asserts, as he does, that the giving of these certificates under those circumstances was an offense of the code of medical ethics.

A short time after Dr. Joy had secured these certificates he came to certain members of the faculty, claiming that he had been deceived in the character of the men to whom he had intrusted the construction of his belt; that he had signed a contract giving them the right to manufacture and sell it, but a verbal agreement existed to the effect that all advertisements and notices of the same should be submitted to him before published. That in violation of this a quack pamphlet had been issued and he felt deeply chagrined and mortified, but knew not what to do, having no written specifications touching it in the contract. He further stated that he had given no permission for the use of the certificates procured of the faculty. Believing Dr. Joy was sincere in his professions and that he had been duped himself, those of us so consulted treated him charitably, advised him to do all he could to stop the circulation of the pamphlet and hoped he would be able to do so. We did not read the pamphlet, seeing by its cuts and make up that it was disgracefully quackish. We did not know then that it contained any letter from Dr. Joy endorsing the pamphlet, nor did he call our attention to the fact. Later, it came to the notice of the faculty that these pamphlets were in circulation, and last June the faculty appointed Dr. Joy and Dr. Palmer as a committee to investigate the matter, to get legal advice and, if the law afforded any redress, to stop the circulation of the pamphlets. Soon after Dr. Joy sent word to Professor Palmer that he had negotiated with Wagner & Co., the parties publishing the pamphlet, and that it would be withdrawn and an end put to the matter. This put a stop to further efforts on Dr. Palmer's part, until it became known that the pamphlets were still circulated, and then Dr. Palmer secured a pamphlet and it became known that it contained a letter from Dr. Joy endorsing Wagner & Co., while the other certificates had been used as an endorsement of Dr. Joy. Dr. Joy when confronted with this, repudiated the letter and denounced it as a forgery; and he further declared that he never invented the scrotum device or any other of the absurd things found in Wagner's pamphlet. Then it began to dawn upon those giving the certificates to Dr. Joy, that *they* and not *he* had been duped, since he was not, as he had represented, powerless to dictate to and control the actions of a firm that had been guilty of forgery, and at the last meeting of the Regents they were presented with the facts in the case, and asked to investigate the matter and remove any member of the faculty found responsible for the existence of the pamphlet. The Regents postponed action for a future time, but unless Dr. Joy shows that the letter was a forgery by punishing Wagner & Co., as they deserve, he will without doubt be expelled from the department by a vote of the Board of Regents, in accordance with the request of the faculty. The result of legal investigation shows that the law looks upon the certificates given Dr. Joy as his property, and while he can easily get an injunction, if his story is true, those giving him the certificates have little prospect of legal redress. We all regret the matter, and abhor the infernal quackery of Wagner & Co., as much as it is possible for any one to do so, and shall seek the surest and quickest way to stop the use of our names in connection with it. This is a plain statement of all the essential facts, and we give it for the purpose of affording data for the judgment of the profession in the matter.

Now a few words for *The Michigan Medical News.* We will preach its editor a short sermon in the matter, from a text contained in the editorial columns of his own journal:

"The Ishmælite is an unfortunate individual whose case calls for commiseration. When he embarks in medical journalism he soon finds that the turning of his hand against every man in the hope of supplying the spice to his columns which his wit or ability is unable to furnish, is an unprofitable venture. Sensationalism at the expense of veracity never pays."

So when he asserts for sensationalism that the certificates given by Langley, Maclean, Palmer, and myself were, under the circumstances, a violation of ethics, he states what is false and it will not pay him.

When he states that Dr. Palmer defends Joy and Wagner, he states what is false and it will not pay. When he states that the certificates were given to deceive the manufacturer, he is guilty of a slander that admits of no excuse or paliation. The certificates were, as Dr. Palmer said, proper enough if used properly. No one giving them would have objected to their publication if the belt had been offered only to the profession with other electrical appliances and no absurd or untruthful claims had been made as to its therapeutic application. The evil consists in the improper use made of them, which the writers did not contemplate and for which they are not responsible.

And now as to the motive that actuates Dr. Mulheron. He is very indignant at the charge of animus, though he does not say who charges him with it. Certainly Dr. Palmer, whose letter he is reviewing, does not. But a guilty conscience needs no accuser. Whoever will read Dr. Palmer's letter and Dr. Mulheron's editorial review of it will not need to be told that there is an animus far different from love of the truth or regard for the honor of the profession. Even a slight sense of honor and decency would have led Dr. Mulheron to write to Dr. Maclean or myself, since we have always been his personal friends, and he is indebted to us for pecuniary and other assistance in starting his journal, for a statement of the facts before he arraigned us for quackery before the profession. He cannot conceive how *we* could be duped, and sneers at us for our simplicity. A generous soul would accord to us the same charity that we extended to him when *he was duped* out of his journal a few years ago. He came to us outwitted and helpless. We did not sneer at him but put our hands in our pockets and helped furish him some means to start another. We took him then, and from time to time afterward to our classes and filled his subscription list largely in that way. If it had not been for our kindness to the poor dupe, Mulheron, he would not have had this shingle with which to throw mud at us now. It is no abhorence of quackery that animated this attack. Has not the *News* engaged in advertising quack remedies a long time? We submit one of these advertisements taken from advertising page 10, of Number XVI, Volume IV, which we found cheek by jowl with the editor's high-toned review of Wagner's pamphlet:

Advertisement.—"Dr. Jack's Santonine Lozenges. A sure remedy for worms in children. Each lozenge contains half a grain of santonine, the active principle of worm seed."

How is that for quackery? *Does Dr. Mulheron know of a sure remedy for worms in children? Does he know of worse quackery than to advertise one?* Two one grain doses of santonine has caused the death of a child five years of age. What does Dr. Mulheron think of its use in half grain doses for infants only a few months old, who generally get dosed by ignorant mothers with these "sure remedies for worms?" What would he say to bereaved parents who should tell him they saw it advertised in his medical journal and thought he endorsed it? Does Dr. Mulheron think half grain doses of santonine for infants a few months old safer than Wagner's Scrotum Device? Are any of us responsible for Mulheron's quack advertisements because we aided him to start this medical journal, believing he would use its pages only for legitimate purposes? 'Tis plain that no horror of quackery led Mulheron to make his attack upon the medical faculty of the University.

Is it a desire, as he avers, "to call the attention of his readers to inconsistencies of professional conduct in men occupying representative positions in reputable medicines," that incited this attack? If so why did he not begin at home? Why did he attempt to take the mote from his brother's eye before he plucked the beam from his own? Why does he look after the inconsistencies in this school before he does those in his own? His school is guilty of enough, and we will mention a few: In the first place it started with a plea that the examination for admission was not sufficiently high in either of the existing schools in Michigan. The profession were promised a step in advance, so having adopted a name that should be easily confounded with the medical college of the Michigan University, they started out. The University had her preliminary examination and discarded those thought unfit to enter. As many of these discarded ones, we believe, as applied for admission to the Michigan College of Medicine, gained entrance. At any rate, we are credibly informed, one did. How is it that Mulheron is mole-eyed in regard to this inconsistency in a faculty with which he is associated? Not only this, but their list of graduates contains the names of several young men who here were not expected to pass their examinations, but leaving here got their diplomas of the Michigan Medical College long before their brighter classmates got one from the University. We can give the names, if Dr. Mulheron or any of his colleagues wish them. Why is the *News* so mole-eyed to this "inconsistency practiced by men in representative position," who had so boastfully undertaken to elevate the standard of medical education? The members of the University medical faculty have long known of this, and have sometimes felt it a duty to call attention to the fact, but adhering to their policy to attack no one and to fight only when attacked, they have refrained from calling the attention of "the profession generally, especially the profession of this great state" to the facts "to determine whether this is not quackery in high places."

We would not have referred to this now only that this attack cannot be masked, and means that Mulheron and others of the faculty of the Michigan College of Medicine, unable to attract students by offering superior advantages, have consented to become "base rivals who vainly seek to gain renown; and build themselves up by tearing others down." They are the men who peddle the news of Wagner's pamphlet on the street. They are frequent applicants for copies. "I'd give fifty dollars," wrote one of them, "if only these Detroit 'fellers' had their foot in it. I could use it to good advantage." If smut is worth fifty dollars to use against a rival school with only forty or fifty students, it is easy to estimate its value to use against a school with its four hundred. Mulheron, as editor of one of their organs, has undertaken this dirty work for them. He may get the same reward as was dealt out to a certain other editor who mistakenly in the interest of his school, prostituted medical journalism to the vilest slander in attacking this school a few years ago. He finds that now they have no more such work for him to do, since it does not pay, they can find "an equally competent man for his place." Mulheron's colleagues may be of similar minds some day. Meanwhile, what does the profession gain by this wrangling, and multiplication of medical colleges? If the Michigan College of Medicine can by better facilities, by more experienced and more able teachers, and by its elevation of medical education, attract to its lecture rooms all those students who now flock to the University, no one will more gladly witness the result than those who now teach in its halls. Until they can do this such senseless attacks as this can do them but little good. They may offer fifty dollars for smut to throw at the Detroit Medical College, and as much as they can afford for mud to fling at the University, but the whole can only equal the sum of its parts and their college can never be better than the men who compose it. Meanwhile it is devoutly to be hoped that sometime a better class of men may fill the places of those who now destitute of honor, and practically unmindful of the code, disgrace the profession by their jangles over medical ethics in Michigan. G. E. FROTHINGHAM.

THE INTERNATIONAL MEDICAL CONGRESS.

LONDON, August 15, 1881.

EDITOR OF THE PHYSICIAN AND SURGEON: I shall not attempt to give any account of the various festive entertainments which the Londoners furnished the members of the Congress with unlimited liberality. Nor shall I be able to give an extended review of the work of the various sections. For much of my information I am indebted to reports of the meetings in the *Times*, *Lancet* and *British Medical Journal*.

Anatomy.—Professor His thought that the normal, human embryo probably never has a free vesicular allantois. This he endeavored to demonstrate by wax models and steroscopic views of embryos. Others thought this conclusion hardly warranted, as the embryos obtained from abortions are frequently pathological. Professor Turner described the crania of the natives of the Admirality Islands. The crania were markedly dolichocephalic. Those of the females were microcephalic, while those of the males were mesocephalic; the difference between the two sexes being about two hundred and fifty cubic centimeters. The skulls of some other savage tribes were also described. Professor Struthers showed that the supra-condyloid process existed in a rudimentary state in all men. The theory of the descent of man was brought out in this connection, and the anatomists without an exception seemed to be believers in evolution. Professor Lesshaft thought that the human stomach lies more vertically than is usually supposed; while others thought that the vertical position was maintained only during childhood. The question of determining the homology of muscles from the nerve supply was discussed with considerable interest. Dr. Kölliker, Jr., demonstrated the separate existence of the intermaxillary bone in the human fœtus up to the eighth week. Mr. Fenwick described the subcutaneous veins of the trunk which he had dissected out under the direction of Professor Braune, of Leipzig. They may be divided into three zones: an upper one emptying into the axillary vein, a lower one, into the femoral, and an intermediate one, destitute of valves, and emptying into either of the other zones. The communication between the epigastric veins and the portal system through Sappey's vein in the round ligament was demonstrated. Professor Sapolini also described as a thirteenth cranial nerve the origin of the portio-intermedia of Wrisberg from the brain and traced it into the chorda tympani.

Physiology.—The most animated, as well as the most important, discussion before this section was that between Professors Goltz and Ferrier on the localisation of the functions of the cerebral convolutions. The former held, that after removal of all the gray matter from the motor and sensory areas of the brain of a dog, the animal still possesses, though in a lessened degree, the power of movement and the various senses of smell, taste, hearing, etc. His method of removing parts of the brain was by a circular drill, and he showed a dog, from whose brain he claimed that he had removed all the supposed motor and sensory areas. While the animal was clumsey of gait, he showed no evidence of paralysis or loss of special senses. On the other hand, Professor Ferrier showed two monkeys, in one of which right-sided hemiplegia had followed removal of the left motor area; while in the other, deafness had resulted from removal of the auditory area. Professor F. removed the parts of brain with the galvano-cautery. How could these results be explained? Is there so great a difference between the brains of dogs and those of monkeys? The dog and monkeys were killed and the brains given to a committee for anatomical and histological examination. When the brains were submitted to the inspection of the section, it seemed evident that Professor Goltz had not succeeded in removing all the gray matter, as he thought he had done. This is probably the explanation of the apparently great discrepancy between the results obtained by the two investigators; but we shall anxiously wait for the report of the committee.

Professor Rutherford in discussing striped muscular fibre sustained the view of Kölliker, that the sarcous elements consist of fibres held together by a small amount of interstitial matter. Eosine and aniline-blue stain the sarcous elements of Krause's membrane and are of much value in differentiating the parts. The sarcous elements are dumb-bell shaped with a slight enlargement in the middle of the shaft in the position of Hensen's stripe. Krause's membrane is due to a row of globules. In contraction the refractile matter of the sarcous elements, moves toward the ends leaving the shafts clear. The shafts then become the clear stripe, while the original stripe is dimmed by the transparency of the refractile matter.

There was an interesting discussion on the innervation of veins. Dr. Roy has found by new apparatus invented by himself that there is no evidence of the existence of vaso-dilator nerves, in the spleen and kidney. The same distinguished young physiologist has shown that the spleen rhythmically contracts and dilates.

Pathology.—In this section the debate at one time became very warm. It was on the subject of micro-organisms to which two entire days were devoted. Professor Bastian held that these organisms might arise by decomposition of the normal tissue. M. Pasteur cried out with vehemence in his native language, "It is impossible," "Never, never, do these organisms arise save from preëxisting germs." Dr. Kock explained his methods of cultivating these organisms and showed a potato containing several distinct beds. *The Lancet* comments upon the fact that no Americans took part in the work of this section, and concludes (and we must acknowledge justly) that pathology has no original investigators in the United States. It is a lamentable fact, that American works on histology and pathology are, as a rule at least, objects of ridicule to the profession in England, Germany and France.

Medicine.—Professor Langenbeck stated that in some cases of locomotor ataxia, he had found that stretching the sciatic nerve had releived some of the ataxic symptoms. Professor Brown-Sequard supported this view and stated that he had found nerve-stretching to influence the sensory functions of other nerves.

Professor Erb of Leipzig read a paper upon "Syphilis as a cause of locomotor ataxia." He had found eighty-eight per cent. of his cases of ataxia preceded by syphilis. This view was opposed by others, especially by M. Lancereaux of Paris, who maintained that the lesions of ataxia do not correspond with those of syphilis, and that the two diseases are simply coincident as both are most frequently found in those addicted to sexual excesses.

Professor Brown-Sequard pointed out the fact that puncture of the medulla would cause degeneration of the sciatic, and on the other hand lesions of the sciatic might produce changes in the motor centers of the brain.

Dr. Mahomed read a paper upon "Brights disease without albuminuria." In these cases there are cardiac-changes characteristic of Bright's disease with red, granular kidneys without albuminuria. Out of sixty-one cases observed by Dr. M., twenty-one had proven fatal. Unfortunately the remarks upon this affection were not very lengthy, Dr. M. contenting himself by saying that a full account would appear in the forthcoming volume of *Guy's Hospital Reports*.

The relation between gout and rheumatism was discussed by Dr. Hutchinson. He stated that rheumatism is a liability or tendency to joint disease, a catarrhal arthritis, from exposure to cold and is not due to nervous influences; while gout is a humoral arthritis due to errors of diet and defective assimilation. Both tendencies may be hereditary.

Surgery.—It may be said that the most interesting discussion in this section was that on Listerism. The conclusion seemed to be that the elaborate use of the spray as practiced by Lister was unnecessary and possibly hurtful. The great ovariotomist Keith, has ceased to use the spray and has better results without than with it. But understand, all were agreed as to the value of antiseptic dressing; they differed only as to the antiseptic to be used and the method of application. Keith and others were confident that they had seen cases of carbolic acid poisoning from the use of the spray. A German delegate after listening to the discussion, exclaimed, "*Fort mit dem Spray.*"

Obstetrics.—In this section the discussion elicited but few new facts. There was great diversity of opinion as to the value of Battey's operation. While Dr. Battey has performed the operation but sixteen times in ten years, Mr. Tait has operated sixty-five times since May, 1879. Mr. Spencer Wells had never seen a case in which he thought the operation justifiable. Professor Goodell thought that in the future the ovaries of insane women would be quite generally extirpated. Dr. Martin, of Berlin, thought that the results of the operation were published too soon, as the nervous symptoms often returned after a few years.

Diseases of Children.—In this section, our distinguished countryman, Dr. Sayre, must have been satisfied with the universal consent with which his treatment of curvature of the spine has been accepted. All agreed as to the great value of the treatment, but cautioned against the danger of over-extension. Dr. Sayre himself, spoke very forcibly upon this point and objected to Langenbeck's method of anæsthetizing the patient before suspension. The treatment of lateral curvature by Sayre's method was regarded as simply supplementary to Massage.

Thus, Mr. Editor, I have endeavored to give the main points brought out in the sections, in which the general practitioner is most interested. Besides the addresses referred to in my last, others were given by Dr. Billings, Professors Huxley, Pasteur and Volkmann. The address prepared by the late brilliant Dr. Raynaud, of Paris, was read by his friend, Dr. Féréol. Dr. Billings' address upon "Our Medical Literature" was considered one of the most interesting given at the congress. His four rules to be observed by contributors to medical journals are as follows: (1) Have something to say; (2) Say it; (3) Stop as soon as you have said it; (4) Give the paper a proper title.

Hoping that THE PHYSICIAN AND SURGEON will secure a better reporter for the next International Congress, I am, with best wishes, Yours, MEDICUS.

PRIZE ESSAY.

The committee of selection appointed by the chairman of the section on Practical Medicine, Materia Medica and Physiology, at the recent meeting of the American Medical Association, have selected and hereby announce, as the subject for the prize to be awarded in 1883, the following question:

What are the special modes of action or therapeutic effects upon the human system, of water, quinia and salicylic acid, when used as anti-pyretics in the treatment of disease?

The essays must be founded on original, experimental and clinical observations, and must be presented to the chairman of the committee of *award* on or before the first day of January, 1883.

N. S. DAVIS,
H. D. HOLTON, } Committee of Selection.
W. B. ULRICH,

A LETTER FROM DR. JOY.

EDITOR OF THE PHYSICIAN AND SURGEON: In view of the criticisms that have appeared in the press of late in regard to a pamphlet published by Wagner & Co., of Chicago, advertising certain electrical appliances purporting to be invented by me, I think it but proper, in justice to myself and others of the University implicated, to give a brief history of the matter.

Sometime last year I had occasion, at the request of Professor Maclean, to make an electrical appliance in the form of a band, to be used on a patient of his. He seemed to be very well pleased with the working of the apparatus, and I then had some talk with him as to the advisability of securing the manufacture of such instruments for sale as a convenient mode of applying a mild, continuous current of electricity. Nothing more was thought of it till several months after, when it was suggested to me by some of my friends at Marshall—my former home—who had heard of the invention, that I put it in the hands of Mr. Wagner, then living at Marshall, as an energetic and good man to manufacture and sell the same.

Following the suggestion, I negotiated with Wagner for that purpose. He seemed very willing and glad to enter upon the business. I informed him that it must not be carried on in an unprofessional way, but should be advertised in a proper manner, and sold as surgical instruments and medicines properly are. I told him if the business was carried on in that manner I thought I could obtain certificates from some of the faculty, recommending it. This he promised to do, and at the same time agreed to furnish me with the proof sheets of any matter he intended to publish advertising the business, so that I might examine them and show them to the other members of the faculty for their approval. With this understanding I obtained the certificates of Professors Langley, Maclean, Frothingham and Palmer.

Being engaged at Ann Arbor I paid no further attention to the matter till I received a pamphlet already published and bound, containing a letter purporting to be written by myself, together with the certificates in *fac simile*, which I had obtained, and a large amount of other matter. The letter introducing the pamphlet purporting to come from me I never wrote or authorized. The manner of applying electricity to different portions of the body in the form of various devices, I knew nothing about until I saw the pamphlet.

When I had looked over the pamphlet I was much disgusted and angry, and immediately showed it to Drs. Maclean, Frothingham and Langley. In order to put a stop to the thing I wrote to Wagner and received a reply which led me to think that it would be attended to at once. Finding that no apparent action had been taken by Mr. Wagner, at one of the regular faculty meetings, at my request I made a statement of what had been done. Dr. Palmer and myself were appointed a committee to discover the best method of speedily closing the business and stopping the further circulation of the pamphlets. This meeting was held just before the closing of the University for the summer vacation in June last.

About this time quite a large number of the pamphlets were sent to persons in Detroit.

I returned to Marshall a few days afterwards and received from Mr. Wagner assurances that he would close the matter up without delay, and that all advertising should cease. He gave orders to his advertising agents to remove all advertisements from the papers; and I soon had the satisfaction of being informed that his orders had been carried out. Mr. Wagner has written within a few days that he expected his business and his Chicago office to be closed and to return to Marshall himself to engage in other business.

The attempt to manufacture and sell my belt has resulted in a great mistake, which no one can regret more than I do, but for which mistake neither myself nor anyone connected with the University can be held responsible by any fair minded person. Instead of a source of any pecuniary profit it has been one of loss to me. I was never a partner with Mr. Wagner in the business, but in case it had succeeded was to have been paid so much according to the number of belts sold.

The filthy, scurrilous articles which have appeared in certain quarters concerning the quackery of the business, I do not consider worthy of any notice by me here. I mean, however, whether in this connection or otherwise, whenever my professional or personal honor is assailed by anyone, to vindicate it either through the press or by means of the harsher weapons which are furnished by the law. Yours truly,

Douglas A. Joy.

Ann Arbor, September 26, 1881.

AN ERROR CORRECTED.

The prescription given on page 398, of The Physician and Surgeon, to be used with douche for catarrh, should be as follows:

℞.	Morphiæ sulphatis	gr. v.
	Sodii chloridi	
	Sodii biboratis	aa ʒij.
	Tincturæ kino	
	Aquæ rosæ	aa ℥j.
	Aquæ puræ qs. ad	℥jv.

M. S. Put ʒij in one-half pint tepid water, and use with douche night and morning.

W. W. Mather.

Saugatuck, Michigan, September 20, 1881.

A DIAGNOSIS WANTED.

Editor of The Physician and Surgeon: In the afternoon of September 19, as I was strolling through the medical museum I met the subject of my sketch. He was a native of Sweden, medium height, stoutly built, florid complexion, sanguine temperament. He said that he had never been sick a day within the scope of his memory. He spoke English very imperfectly but was apparently rather intelligent. Upon his learning that I was a medical student he called my attention to a tumor in his mouth, situated on the posterior wall of the pharynx on the median line. It was somewhat larger than an English walnut. Its contour was round and it was covered with healthy mucous membrane continuous with that of the pharynx. The tumor possessed a semi-fluid consistency, and the tenuity of the cyst wall led me to suspect one of two conditions, namely, that the tumor had its origin from the recti capitis antici or longus colli muscles and areolar tissue interposed between the anterior aspect of the spine and the posterior wall of the pharynx; or upon the other hand that the origin of the tumor was deeper and had either absorbed a passage through the interposing structures, or had displaced them in such a manner as to admit of its encroachment upon the posterior wall of the pharynx.

I learned the following facts in regard to the history of the affection:

(1) It was congenital.

(2) It had never increased in size.

(3) It had never caused him any trouble or pain, except when it was manipulated or irritated.

(4) When irritated it caused him to feel faint, with a numb feeling in his arms and hands and sometimes in his legs and feet.

(5) A homœopath residing in Detroit advised him to have it extirpated before it filled his mouth. (See second point in history.)

After learning the history, I proceeded to investigate the sensibility of the growth and either from my injudicious manipulations or the extreme delicacy of the tumor the result to the gentleman was syncope, but the partially inverted position soon restored him. I then endeavored to persuade him to go with me and present his case to some member of the faculty, (as I considered it something rare) but he plead poverty and horror of doctors and promised that he would not have it extirpated.

From the facts that his health was good, that the tumor had existed since birth, (thirty-five years), caused him no pain except on irritation, no signs of ulceration, family history good —I say from these points, I excluded the diagnosis of a malignant growth. But from the facts, namely, that it was congenital, caused him to faint when manipulated, (showing intimate relation to the nerve center), I diagnosed, antero cervical spina bifida, simply from its position and my idea as to its nature. Yet I have never read of, and am unable to find, a treatise on spina bifida in this location. If my diagnosis is correct, will you please inform me where a similar case is reported, and if my diagnosis was wrong, what was the nature and origin of the tumor?

Respectfully yours,

O. S. Bailey.

ANN ARBOR, September 21, 1881.

TRANSLATIONS.

Translations from Russian Journals for THE PHYSICIAN AND SURGEON.

BY RALPH D'ARY, M. D., ROMEO, MICHIGAN.

MILK DIET IN HEART DISEASE.

Dr. W. N. Schnaubert contributes a remarkable article on the above subject to the *Med. Obozr.* for June, which we reproduce in full, except the eight cases in practice whose clinical history he gives, and of which we select only one for unabridged translation. He writes:

The treatment of diseases of the heart, or, speaking more correctly, of the disorders consequent on heart disease, by means of milk diet, is hardly mentioned in medical literature. Hence I beg leave to call attention to several cases in which I employed this diet with more or less success.

Milk treatment in general, which was very much used in the past ages, had fallen into complete disuse in our century, but has lately again been brought forward as a valuable dietetic means of treatment, in the writings of Inozemtsef and Karrel, in Russia; Pecholier, Jaccoud, Potain, and others, in France; and Niemeyer, Lebert, and others, in Germany.

The following case may be considered typical:

Madame N. de B., aged forty. Since the age of twelve she has suffered from repeated attacks of articular rheumatism, palpitation and dyspnœa, etc. Since 1873 she has been subject to faintings, metorrhagia, debility, emaciation, etc. Digitalis and nitrate of silver had been used without any effect whatever. Dr. Pagenkopf had recommended milk diet which caused prompt and decided improvement. From the first day of her milk diet her sleep became more quiet, her arms and hands did not become benumbed (as they had done previously), her appetite returned, the dyspnœa disappeared. From the third day forward she was free from her habitual cough and headache; on the seventh day her liver (which had been of enormous size) had become considerably reduced and softened. From the first the heart-beats became less frequent, and the heart less irritable, although it beat irregularly, as before. She gained rapidly in strength. Auscultation revealed no change. The patient continued the milk diet for a long time and then gradually adopted an ordinary regimen. Towards the end of 1875 she was attacked with acute bronchitis, which produced severe disturbance of the cardiac compensation, with symptoms of infarctus of the spleen and œdema of the lungs. She recovered only partially and suffered almost constantly with palpitations, loss of strength, etc., until the end of 1880. From that time she began to fail more rapidly and on the 4th of March, 1881, she presented the following condition:

Considerable emaciation, jaundice, great muscular debility, œdema of the lower extremities, the abdomen exceedingly hard, frequent colic and flatus, varices hemorrhoidales, slight ascites, liver very large, painful, severe dyspnœa and palpitation, indications of severe organic disease of the bi-and tricuspid valves, pulse seventy-five (had previously been sixty) compressible, very irregular, ten intermissions per minute; amenorrhœa; urine less than five hundred cubic centimeters. Acetate of potash produces no effect. Sleep disturbed, frequent headache.

Strict milk diet was ordered—skim-milk, at stated intervals, beginning with very small quantities and increasing them gradually; complete prohibition of any other food or drink. The results were as follows:

DATE.	CUBIC CENTIMETER MILK.	CUBIC CENTIMETER URINE.	REMARKS.
March.			
5	240	440	Weaker towards night.
6	420	520	Weakness greater still; stronger again towards night. Less flatus.
7	480	520	Sleep very good, better than any time for a year back. No more pain in the liver, less flatus, abdomen smaller and softer. No dyspnœa, more strength.
8	480	350	Continued improvement.
9	540	400	Sleep good, no pains. Heart beats 64, with two intermissions per minute. Grows stronger. Abdomen still decreases.
10	600	370	Continued improvement.
11	660	470	No more œdema towards night. A little bread allowed the next day.
12	720	510	Little flatus, abdomen soft. No dyspnœa or palpitation, pulse a little fuller, 66, no intermissions, but some accelerations. Liver considerably softer.
17	840	920	Improvement continues.
19	900	560	Liver is smaller, jaundice has disappeared. Pulse 66, irregular, but no accelerations.
21	1020	580	Appearance of menses.
27			Bread and an egg are allowed.
30	1320	1000	No changes in auscultation; the patient can walk and even climb stairs without dyspnœa; sleeps well, etc. Egg, milk-gruel, etc., are gradually allowed, but milk is still the staple of food.

To sum up, we had found a chronic, aggravated organic disease of the heart, disturbance of compensation, arythmia, emptiness of arteries, engorgement of veins and of the lesser circulatory circle, poor digestion and assimilation, uselessness of digitalis, acetate of potash, etc. Both times the milk diet had brought decided and rapid improvement. Its action may be considered in four groups.

(1) Improvement of digestion, lessening of meteorismus (which took place rapidly).

(2) Regulation of the cardiac function, lessening of the arythmia (gradually obtained), slowing of pulse, increase of urine in proportion to increase in allowance of milk (prompt), lessening of venous stasis of the liver and œdema (gradual.)

(3) Improvement in sleep and mental condition (rapid.)

(4) Improvement in nutrition (assimilation), increase of muscular strength (gradual).

The rapid changes in the patient's condition, we find, took place during the first days of the regimen, when the quantity of milk was insufficient for complete sustenance; the gradual changes took place during the first two weeks, towards the latter end of which period the quantity of milk allowed was sufficient for the complete sustenance of the patient's nutrition.

The second patient's case was fully analagous to that of the first.

The third case was one of functional heart disease, with obscure chronic disease of the liver, about the time of the menopause, with hypochondria.

The fourth case was one of mitral deficiency.

The fifth was the same, with catarrh of the alimentary canal, otherwise similar to the first. In all these cases improvement was decided and analagous to the first case.

The sixth case was that of a male, with insufficientia valvulæ aortæ, and probably atheromatous process, daily angina. Complete failure of pharmacutic remedies. Rapid improvemet on milk diet, until, against orders, the quantity was increased to excess, causing severe relapse of attacks of angina pectoris, during one of which the patient died.

The seventh case was a desperate one; female, anasarca and ascites, enlarged liver, insufficientia et stenosio mitralis, occasional albuminuria. No improvement, death on the sixth day of the milk diet. Autopsy revealed, (besides the stenosis ostii venosi sinistri) infarctus of the lungs, nephritis interstitialis, etc.

The eighth case was similar to the seventh in its nature and course.

Autopsy showed considerable atheromatous changes in the aorta, infarction of lungs, cirrhosis of the liver.

Of the two latter cases it must be remarked that the profound lesion of the vascular apparatus precluded all possibility of reëstablishing the circulation.

The above cases are sufficient to give us a general idea of the influence of milk diet in heart disease. The similarity and intensity of its effect in the several cases convinces us that we have in this diet a powerful adjunct to cardiac therapy, and justifies us in the hope that after some further observation it will be possible to establish positive indications for its use. In the meanwhile I beg leave to present a few remarks:

The first group of improvements above mentioned related to digestion. Owing to the easily digestible nature of its ingredients, milk occupies a prominent place in dietetics. When properly digested, it forms but a minimum of fæces and flatus, and has therefore a soothing sedative influence on the sensory and motor nerves of the intestine. This is a fact established long ago by numerous observations, which I shall not recapitulate. This property of milk must be considered of great importance in heart disease, which is so constantly accompanied by idiopathic and symptomatic disorders of digestion. Constipation is, ceteris paribus, rather a favorable symptom; diarrhœa however, invariably indicates that the milk is badly digested, and in some cases it has to be abandoned altogether, since diarrhœa, increasing the patient's debility, is a dangerous complication when the heart's compensation is disturbed. When the diet is properly regulated, the improvement of digestion is one of the most evident and speedy results. Milk diet is indicated when the cardiac anomaly is complicated with dyspepsia, gastro-intestinal catarrh, atony of the ailimentary organs, etc.

The second group is that of the influence of the milk diet on the nervous system. In this it is less pronounced and less constant (if we exclude the nerves of the digestive apparatus and the heart). We notice that the milk diet lessens the patient's irritability of disposition or temper. This sedative effect cannot depend altogether on the change produced in the general nutrition or the nutrition of the nervous system in particular. For if that were the case we should expect this effect to be produced gradually, *pari passu* with the progress of nutrition, whilst we actually observe, that it is produced promptly, during the first days of dieting, and is lessened afterwards. When we notice, further, that the milk diet causes an increase of P_2O_5 in the urine (as I have ascertained by experiments on myself) we must naturally come to the conclusion that there is at least a possibility of a direct sedative effect of the milk on the nervous system. Of all the ingredients of the milk, or of its products after digestion, this effect with any degree of probability could be ascribed only to the lactic acid, which is formed abundantly in the bowels from milk-food (three or four per cent. according to Richet). That we cannot ascribe the sedation to the effects of the deprivation of food, is shown by the fact that the same sedative effect, and sometimes in a greater degree, is obtained when *large* quantities of milk are taken. This, too, I have ascertained by experiments on myself. On the other hand, however, we must lay it to the influence of the milk on nutrition, when we see an increased nervous irritability (as for example in erethism) *slowly* lessened, during a prolonged milk diet, until it reaches the normal condition. And indeed, in these cases we generally notice an improvement in digestion and assimilation with consequent improvement in nutrition, in which latter the nervous system must participate. The milk diet may therefore be prescribed in those cases of organic cardiac disease, in which an irregular action of the heart can be traced to excessive nervous irritability; also where there is sleeplessness, or headaches. The diet may also prove useful in angina pectoris. It must not be forgotten, however, that the sedative effect of milk on the nervous system is less pronounced than its other effects, and should therefore be relied on in those cases only where there is time to wait. In cases of violent disturbance prompter and more powerful remedies will have to be used.

With regard to nutrition we must distinguish two periods in the course of milk diet; firstly the period of deficient, and secondly of sufficient alimentation. The hungry period, causing a diminution of the quantity of blood would *a priori* be considered suitable for those cases where an excess of it imposes too much labor on the heart, as for instance at the climacteric period of women, as in the cases cited above. But the diseased heart may have great difficulty in controlling even the usual average amount of blood, and it is to this circumstance that I ascribe the fact that the greatest effect of the milk diet is observed during its first period, namely, that of insufficient alimentation. Where, therefore, it would seem of advantage, this partial starvation period might be prolonged and the quantity of blood thereby further lessened, or, in other cases, this period might be lessened. It would not do, however, to omit it altogether, beginning at once with large quantities of milk, for experience has shown that a gradual increase of the doses insures greater certainty of a complete digestion of the milk, and consequently of success in the treatment. When large quantities of milk are used, nutrition can be increased thereby, the patient gaining in weight. Of course the quantities would differ with each case. This result is most apparent when the patient is most emaciated at starting. When the patients are tolerably well nourished it is often necessary to content one's-self with keeping up their weight, as the quantities of milk necessary for increasing it, sometimes cannot be borne by their stomachs. Large quantities of milk are mostly beneficial to anæmic, exhausted patients, suffering from "cachexia cardiaca," etc.

The influence of the milk diet on the heart and the vascular system is limited strictly to their functional activity; neither the observations made on the patients, nor the results of autopsies warrant us to expect any improvement in the morbid condition of the valves or muscles. As we have seen, one of the first results of the diet is regulation of the heart's action; first, a lessening of its irritability and a slowing of its abnormally frequent contractions; later, a more or less complete restoration of its proper rythmus. Although an increase of arterial blood pressure has not yet been determined by demonstration, yet judging from symptoms, especially the increase of urine, I believe such pressure to be caused by the regimen. The *latest* change noticeable in the vascular system was a decrease and disappearance of venous stasis and dropsy. I abstain from entering on a full discussion of the causation and connection of these symptoms, but will notice the following: We observe that the milk diet influences every one of the morbid conditions found in cases of disturbed cardiac compensation. But I ascribe the greatest importance to the slowing of the cardiac contractions (probably accompanied with an increase of energy) and to the change in the arterial presssure. All the other symptoms I considered merely as the result and consequence of these two improved conditions. The milk regimen presents certain conditions favorable to these improvements; when large quantities are taken, the vascular system receives more water than during ordinary diet. This is proved by the increase of urine (in non-dropsical cases), by the dryness of the rectal evacuations, etc. During the "starvation period" the quantity of blood must diminish, and, ceteris paribus, blood pressure must be lowered. The possibility to change arterial pressure at will by means of diet is a very precious one, since, apart from various collateral advantages, it gives us the means to control the energy and frequency of the cardiac contractions. A further condition, favorable to the regulation of the cardiac function, is the improvement in digestion. A third favorable circumstance, in all probability, is the conveyance into the blood of a considerable quantity of lactic acid, which according to the experiments of Ranke, Goltz and others, has a retarding effect on the heart.

When, in addition to the above, we consider all that is known of the influence of the state of nutrition and the nervous system on the action of the heart and also what we know of the influence of the milk diet on nutrition and the nervous system, we can conclude our remarks by saying that the milk diet acts on the heart in a two-fold manner; immediately, by increasing pressure and augmenting the quantity of lactic actid, and—mediately, by restoration of digestion, etc., etc.

It clearly follows that the applicability of this diet is very wide, it may be employed in all cases of disturbed cardiac compensation, with lessening of arterial pressure, venous stasis, dropsy, etc., *provided* there are no profound lesions of the tissue of the heart and vessels. The most important, though not absolute contraindication is a high degree of fatty degeneration and atheromatous change. Especial attention should be given to the excretory organs. For instance, the equilibrium of vascular pressure is maintained principally by the secretion of urine, therefore profound lesions of the nephritic tissues (which would present an insurmountable obstacle to the sufficient secretion of urine) would contraindicate an abundant use of milk, or any other fluid.

Where time is pressing, the milk diet should be combined with other remedies, for instance, digitalis, narcotics, etc. We come to the conclusion that the milk regimen is sedative, roborant and alterative.

SKIN GRAFTING.

BY GOLDWIG.

Of all known means of treating superficial ulceration of the leg the preference, according to my experience, belongs to these two:

(1) Skin grafting.
(2) Listerism.

The latter method gives prompt and brilliant results in ulcers of small area, but is not efficient in ulcers covering a third or greater part of the leg, such as we country doctors often are called on to treat (in Russia).

The treatment of these large ulcers by means of Lister's hermetic bandage, is of advantage only as a beginning, as a kind of preparatory proceeding, calculated to improve the character of the ulcer. And, indeed, in six to ten days a great change takes place in it, when so bandaged. Though it may have been, as usually, unhealthy, uneven, of a grayish color, with scarcely noticeable granulations, secreting a thin, ill-smelling ichor, it now presents a healthy granulating surface, and secretes a small quantity of odorless, laudable pus. (Only recent wounds secrete no pus at all, under Lister's bandage). This change sometimes manifests itself even after the first dressing, and to some extent undoubtedly is due to the thorough cleansing of the ulcer and its surroundings, which is an absolute condition of Listerism. But a further continuation of this method of treatment has its disadvantages: it is true that the ulcer heals in a comparatively short time, but the cicatrix, which in these cases is necessarily large, soon ulcerates again and retains a decided tendency to relapses, and the ulcer of the cicatrix is more difficult to cure than the original one. As soon, therefore, as the ulcer, under Lister's bandage has assumed a more or less improved appearance, we must try to find means to substitute normal skin for the impending cicatricial formation. Under these circumstances skin-grafting is an invaluable means. But it has its disadvantages, also: (1) not every attempt at grafting is immediately successful, (2) human skin is rather an expensive material, and not always obtainable in the required quantity, the patients themselves generally having an exaggerated dread of having particles of it removed. In one such case I conceived the idea to try the transplantation of large pieces of animal skin to the human body. If it could be done successfully, I reasoned, the whole operation would be narrowed down to this: that a solid piece of animal skin of the required size and shape be adapted to the ulcer and left there until it become united to its surface. I made experiments with the skin of chickens and dogs. I will say at the outset that my attempts hitherto have not been successful, but the results, nevertheless, are not without interest, and rather promising. Of *human* skin I lately made transplantations in twenty-six cases, without one failure, taking either the patient's own, or some one else's skin. My method is the following: Having pinched up, with the forceps, a fold of skin, I cut it off with the curved scissors, and by means of the same forceps I immediately place it on the granulating surface ot the ulcer, which has previously been cleansed and dried with lint. Then I spread the piece evenly by means of a probe or pin, to prevent its edges turning under, and interfering with the desired cohesion. I do not follow the usual method of placing the piece of skin on the thumb nail and cutting it into small pieces, since this proceeding only increases the liability to mortification of the pieces thus injured and bruised. My experience has shown that the transplantation of such little pieces is seldom successful, even when the granulating surface of the ulcer presents the best conditions, while the grafting of one larger piece is generally a success. On the pieces grafted I place a piece of tissue paper, impregnated with glycerine or carbolated oil, fastening it down with strips of adhesive plaster. When the surface of the ulcer is uneven and it is required to adapt the graft to some place lying below the general level, I place over the tissue paper as much lint as may be required to hold the graft down to the granulating surface, also fastening it down with strips of adhesive plaster. The remaining surface of the ulcer is dressed with solution of permanganate of potash (one-half drachm to six ounces). After twenty-four hours—and not after three days, as has been recommended—I carefully remove the bandage, having first well soaked it with tepid water. The strips of plaster, with the lint and tissue paper adhering to it, generally come off very easily, whilst the skin graft remains in its place. At this time it usually presents an appearance like tallow, which generally remains unchanged until the second or third day. The horny layer sometimes peels off on the third day, as a thin membrane, but does not interfere with the progress of the grafting. Once I observed that on the second day the graft became purple, and afterwards it successively went through all the stages of coloration of a common bruise; the extravasated blood was gradually absorbed and vital cohesion took place without accident. Usually on the fourth day there appear on the graft minute, light rosy spots or dots, which increase in size by the next day, whilst the piece of skin becomes surrounded with a narrow shining band of a deep rosy hue. On the sixth day this band and the dots become black, probably from absorption of the permanganate of potash. Upon this latter change of color I have learned to look as the surest sign that the graft has securely united with the underlying granulations. I have said above that I remove the first bandage in twenty-four hours, not after three days, as has been advised by others. I do so, because it is very seldom the case that the grafting succeeds if the bandage is left on so long, even when the ulcer presents the most favorable conditions, namely, when it is covered with good granulations and secretes a small quantity of thick pus. Generally the epithelium of the graft adheres to the paper, in the latter case, whilst the true skin of the graft remains on the ulcer, having the appearance of a little lump of solidified pus, and is easily washed off with water. Since we know that twenty-four hours are sufficient for the healing by first intention of a recent wound, I concluded that the same length of time should be sufficient for the union of the fresh graft with the granulating ulcer, and the very first experiment proved the correctness of my conclusion. That twenty-four hours is more than sufficient for this vital union has also been demonstrated by the microscopic observations of Thiersch (*Berliner klinische Wochenschrift*, Number XXIX, 1874), who succeeded as soon as eighteen hours after the grafting, to completely inject the vessels of the graft through the vessels of the granulations. This, of course, could not have been possible, if there had not already existed an uninterrupted union between the vessels of the granulations and those of the grafts. Thiersch ascribes a special function to the white blood-corpuscles, which in his opinion penetrate into those parts of the grafts, where they meet with the least resistance, namely, the areolar spaces and the gaping blood-vessels, and thus serve as guides to the red corpuscles.

After the ulcer has completely healed, the grafted pieces are found elevated, protruding from the general level, almost like buttons. Very soon their epidermic layer begins to show a rapid and abundant growth, finally attaining considerable thickness and then peeling off. This process is repeated several times, the epidermic accretions gradually diminishing in thickness, until at last the grafted places can hardly be distinguished from the surrounding cicatrix. In one case the hypertrophic layer of epidermis attained the thickness of one-half centimeter. The graftings of chicken and dog skin were made exactly in the same manner, on four patients, the pieces varying in size from that of a dime to that of a dollar. The changes were analogous to those of human skin, but rather slower, especially those of the dog-skin grafts. Physiological union took place in both, but after complete union had been established a gradual process of separation began, until finally the chicken grafts dropped off on the fourteenth day after grafting, and the dog grafts on the twentieth. The places which had been covered by the grafts presented most luxurious, intensely florid granulations and could readily be distinguished. They cicatrised much quicker than the rest of the ulcer.—Translated in abstracted from *Vratsh*, Number XXXIII, 1881.

In reading the above, the question naturally suggests itself: Why should the nutrition of the skin-grafts, after having been established, eventually cease, leading to their death and separation? In answer we submit the opinion of L. I. Tumas, expressed with reference to an experiment of growing together, artificially, by union of skin-wounds, of a kitten and a rabbit. We take the quotation from another number of the same magzine—*Vratsh.*

"By means of a series of very diversified experiments Landois has demonstrated, that blood taken from one animal and injected into the blood-vessels of an animal of a different species, according to the quantity injected, is either decomposed and disappears, or acts destructively on the blood of the animal into which it has been injected; in the latter case the injected blood may produce in the organism of the animal serious pathological changes, often having fatal consequences. . . . . . For by rapidly injecting a considerable quantity of different blood, we very abruptly change the physiological nutrition of the tissues. *In consequence of the abrupt change of the nutritive fluid—the blood—the cells of the organism have not time to adapt themselves to the new condition*, they begin to perform their functions more or less pathologically."

While the mysterious *vis vitae* establishes vital union, drawing probably on the then present stock of normal nutritive fluid in the graft, this union fully admits the strange blood, with the above result—the grafts are nourished, but insufficiently, until they die (and separate) from gradual inanition. It must not be forgotten, however, and indeed, it rather confirms this view, that Dr. Kos has repeatedly succeeded in transplanting rabbit skin to obstinate ulcers on the human. (*Tribune Médicale*, 1874, page 332). A Russian physiologist, Yatsenko, has succeeded in grafting a piece of human skin to an ulcer on a dog's neck, but was unable to graft dog-skin on the human body.—TRANSLATOR.

Translations from French Journals for THE PHYSICIAN AND SURGEON.
BY R. A. PACKWOOD, LES ILES, BERMUDAS, WEST INDIES.

DISAPPEARANCE AND LOCALIZATION OF THE SYMPTOM "REFLEX PATELLÆ," IN LOCOMOTOR ATAXIA.

Professor Westphal has just presented to the Medical Society of Berlin, an interesting communication upon the disappearance and localization of the "reflex of the tendo patellæ."

Sudden, forward movement of the leg, obtained by giving a sharp stroke upon the tendo patellæ, the knee being semiflexed, has always been considered to be regularly absent in locomotor ataxia. From special researches made in 1875, M. Westphal refers the disappearance of this phenomenon of the knee to the lumbar region, and as it acts in locomotor ataxia, to the posterior columns of the cord.

A recent fact enables him to refer again to these data and to localize the lesion with more precision. Abolition of this symptom from the knee may be produced by degeneration of a definite portion of the posterior columns of the cord in the lumbar region.

Among his cases the following is typical:

Patient, a man thirty-two years of age, was brought to the Charité de Berlin in March, 1877. He stated that there were numerous examples of various kinds of nervous affection in his family. Had been blind for six months. Could hardly distinguish with the left eye whether it was day or night. He was decidedly hypochondriacal, and in a little time to this was added marked delirium and hallucinations. At no time were ataxic symptoms noticed, no irregularity of movement; no anæsthesia, no lancinating pains.

In October, 1879, after an alternating period of amelioration and exacerbation of hypochondriasis and dementia, disappearance of the reflex of the tendo patellæ, on the right was observed. From this time the patient became much enfeebled, rapidly emaciated, and suffered profuse diarrhœa. He died about the beginning of January, 1881. Reflex of the tendo patellæ did not reappear on the right side, and disappeared from the left some days before death.

At the autopsy, independently of a very advanced gray degeneration of the optic nerves, the optic bands and corpora quadrigemina, a slight deposit of pseudo membranous matter was found on the inner surface of the dura mater. The meninges were entire.

Sections of the cord were made, having been first hardened in bichromate fluid. To the naked eye, even, one could perceive in the middle part of the posterior columns a clearly cut yellowish zone, upon the neighboring parts. This band of degenerated matter was greatest in the lumbar region, becoming less and less distinct toward the cervical region; its existence was rendered more manifest by the use of coloring reagents. At this point, (the lumbar) by the microscope, numerous little greasy points were observed; adjacent portions showed none. Nerve tubes were few, being atrophied and destroyed. Interstitial cellular tissue was hypertrophied. No lesions of any kind were observed in the cornua, nor in the posterior roots of the cord.

The situation of the degenerated zone in the posterior columns was quite peculiar. In the lumbar region it occupied the middle portion of the posterior columns, extending only to the median septum, so that the fasciæ "de Goll" were not encroached upon. In the dorsal region, the deep portion of the columns "de Goll," the angle which these fasciæ represent, was found included in the degenerated zone. No part of this zone extended as far as the spinal pia mater. The thickness of the sclerosed band diminished as it approached the cervical region, where it was simply a line.

Westphal has seen a certain number of patients who responded to the diagnostic symptoms of locomotor ataxia, and in whom at the same time, reflex of the tendo patellæ was preserved. He has noticed a certain degree of muscular rigidity, a symptom which does not appertain to ataxia. These cases then were not typical examples of ataxia, and Westphal seems to think that it was the same in these, as has often been observed in cases of ataxic tabes dorsalis, where reflex of the tendo patellæ has been noticed to remain. It is possible, however, that this sign may disappear from the knee late in the stage of ataxia, which would, doubtless, indicate that the middle portions of the posterior columns were attacked equally late.

Berger has carefully examined more than one thousand and four hundred soldiers and found reflex of the tendo patellæ to fail in thirteen cases. What then is the significance of this statement? Or has it even any positive indication?

It would be much more important to show that the reflex phenomenon had disappeared, than to notice its absence at a given time, without knowing anything of the individual presenting this anomaly. Moreover, we do not know but that these patients were recently attacked by the medullary affection, of which absence of the reflex of the tendo patellæ might have been the premonitory symptom.

Perhaps, however, the non-presence of this sign may be explained by external mechanical reasons. Westphal has seen this reflex action produced with great difficulty in persons presenting a long and slender tendo patellæ, and in those also who have a very thick cushion of fat beneath the tendon, again it may fail in obese persons. However, there is an interesting indication in the communication of Westphal, and for this reason we have briefly reproduced its principal features.

"MASSIVE PNEUMONIA:" TWO NEW CASES.

In a recent memoir which appeared in *Les Archives Generalé de Médecine*, February, 1881, M. M. de Beurmann and Brissaud have published two new observations relative to this variety of pneumonia and which M. Grancher in a very interesting work (*Gazette Médicale* de Paris, 1878) designates under the name "Massive Pneumonia." The number of observations destined to justify the forming of this variety and its denomination are still very restricted. It appears useful to us to publish in this selection the two cases observed, and which seem to support the opinion offered by M. Grancher, and recently sustained by M. M. Beurmann and Brissaud. They are as follows:

I.—PNEUMONIA IN ONE ADDICTED TO ALCOHOL; SIGNS OF PLEURITIC EFFUSION AFTER SOME DAYS. PUNCTURE. HÆMATEMESIS. DEATH BY RUPTURE OF AN ANEURISMAL DILATATION INTO THE LEFT BRONCHUS. RESUMÉ.

M., thirty-five years of age, entered the hopital de la Pitié, June 16. This man was small, quite muscular, and until this time had been exempt from disease, though somewhat predisposed to bronchitis, never had any affection of the lungs, except slight pains in the side; he often indulged to excess in drinking, sometimes imbibing as much as twelve litres of wine in a day.

On June 12, he was taken suddenly ill with chills and cough. He experienced a violent pain in the left side, and shortly afterwards began to expectorate blood. His condition becoming much aggravated he entered the hospital (June 16).

Examination made on entering: His general condition appeared very good, though there was high fever (39.4), the skin hot, pulse full and frequent, tongue dry. At intervals he was seized with attacks of cough, which increased the side pain, and were followed by a viscid expectoration somewhat adhesive, and striated with blood.

On examining the lungs, the following signs were found: On the left side, no exageration of the vibrations; no matité nor sub matité; no râles, nor blowing on auscultation; respiration nearly normal, though diminished. On the right side sonorousness normal, vibrations remained, but on auscultating a very marked supplementary respiration was perceived; no râles. The apices were intact. There was nothing to notice on the part of the other viscera; no cardiac blowing; no delirium. In spite of the absence of so many signs on percussion, also auscultation, we diagnosed central pneumonia of the left side.

Next day, June 17, condition the same; no other physical signs; although at the apex of the left lung quite a strong blowing, analogous to tubal blowing was noticed; no râles were heard at the end of inspiration nor after cough, no bronchophony.

June 19. Physical signs modified; vibrations notably diminished; dullness on the posterior part of the lung; respiration less clear, no rales; the same blowing at the apex.

On the right; supplementary respiration in same general condition; fever oscillating between 39° and 40°

June 21. The right side of the lung was dull and deprived of all elasticity; the dullness and considerable effusion extended from the supra spinatous fossa to the base of the lung, into the axilla and under the clavicle. Vibrations had disappeared.

On auscultation, no vesicular murmur nor râles, nor blowing in the inferior two-thirds of the lung. At the apex the same blowing, anteriorly and posteriorly, as on preceding days. On the right, supplementary respiration much more marked. Expectorated matter equally modified; from viscous and sanguinolent which it *had been*, it became more serous and only a little bloody; pain in side much less, respiration embarassed, same febrile state.

By reason of the absolute dullness, (matité) from absence of vibrations and respiration, in fact all the symptoms together, M. Dumontpallier thought that a considerable effusion was complicating the pulmonary inflammation. He punctured, but no blood nor other fluid escaped, his condition was not modified during this nor the next day. (Puncture was made by capillary trochar of the aspirator). Two days later, the lung in the same condition, a second puncture was made; only a little blood flowed. The puncture was well borne. No cough; no sanguinolent expectoration.

The next day was passed well, but toward 5 o'clok M. was attacked with a violent cough which brought a little blood. After a minute a second attack followed, and was terminated by a sudden and formidable hæmoptysis and mortal submission, the blood flowed in currents by the mouth and nose, covering the bed and floor.

Autopsy.—Lungs: left side; very little fluid found in the pleura; there were some fibrinous deposits somewhat adherent and resisting, agglutinating the pleuræ costalis and pulmonalis. The lung was easily detached, and on section, pneumonia in the stage of gray hepatization was found occupying it entirely, though toward the apex there remained some points less altered and still filled with air; no tubercles; no cavities.

On the right side, a few old pleuritic adhesions; a little inter-lobular pleuritis; lung infiltrated throughout with blood.

On a level with left bronchus an orifice was found communicating with the aorta. It acted like a little sacciform aneurism opening into the bronchus. Further details of the pathological anatomy will be found described in the bulletins of the Anatomical Society, (Transactions LII, page 452, 1877).

This case was quite interesting, showing the evolution which pneumonia gives, following it day by day.

At the time of noting this case (1877), we were unacquainted with its clinical variety, and it was without the aid of any previous knowledge that these notes were taken. This observation then seems clearly to justify the description of "Massive Pneumonia" made by M. Grancher in 1878.

The following is less clear, but not without interest. It relates to a case of "Pseudo—lobular, Broncho-Pneumonia," which manifested itself by signs more pleuritic than pneumonic.

II.—PULMONARY TUBERCULOSIS, CASEOUS PSEUDO-LOBULAR. BRONCHO-PNEUMONIA. PLEURITIC SYMPTOMS. AUTOPSY.

M., aged sixty, entered the hopital de la Pitié, in June 1877, under the care of M. Dumontpallier.

The man was thin and cachectic, had coughed for several years, expectorating greenish muco-purulent sputa. Examination of the lungs showed the following symptoms:

On the right side, palpation discovered a notable diminution of the thoracic vibrations, except near the apex where they were normal. Percussion denoted absolute matité (dullness) from apex to base, also anteriorly and posteriorly, of this lung.

Auscultation found in the two inferior thirds and posteriorly almost complete absence of the vesicular murmur. There was no blowing nor bronchophony. No râles nor friction was perceived. At the apex anteriorly and posteriorly, respiration was somewhat blowing, and during the attacks of violent coughing subcrepitant râles were distinguished, the voice was slightly ringing.

On the left side: There was neither matité (dullness) nor diminution of vibrations; at the apex only, anteriorly and posteriorly, resonance on percussion was below normal; auscultation discovered, extending over the whole of this side, snoring and sibilant râles and some mucous râles at the apex. Respiration was blowing at the apex, and puerile throughout the remainder of the lung. Cough was frequent, expectoration abundant and muco-purulent. Marked dyspnœa, twenty-eight to thirty respirations per minute. The heart beat irregularly, but there was no blowing sound, no œdema. The patient was emaciated and cachectic, and toward evening slightly pyretic. He said this had been his condition for several months.

We thought that there was in this old man a developed case of pulmonary tuberculosis.

The symptoms observed in the right lung were believed to be due to an old pleurisy, constituted mainly by an enormous mass of false membranes, in the middle of which the lung was entirely enveloped.

Two days later the patient complained of decided malaise, markedly sthenic fever and more intense dyspnœa; temperature was high (39°), respiration accelerated (35 per minute), tongue dry, general condition more grave. We noticed in the left inferior lobe signs of acute pneumonia, matité (dullness), tubular murmur, inspiratory crepitant râles. Death followed two days later.

Autopsy.—The right lung was removed from the thoracic cavity with great difficulty, there being almost complete adhesion between the pleuræ pulmonalis and costalis, and both much hypertrophied.

Almost no effusion; hardly two spoonsful of fluid. The lung was very large, heavy and dense; a fragment of it in water rapidly sank; it was cut easily and with smooth surface; the lung was transformed throughout into a grayish white mass, furrowed here and there with greenish tracts, presenting the appearance of Roquefort cheese. It was in a word a case of "caseous pseudo-lobular, broncho-pneumonia" which had invaded the entire lung. At the apex existed a broken down focus, filled with a brownish peasoup liquid.

Left lung: Few adhesions; on section at the apex were found some grayish tuberculous granulations, hard, of the size of a grain of millet, and some lobular foci of "caseous pneumonia."

The inferior lobe was entirely transformed into a hard and resisting mass, and there existed in it "recent lobular pneumonia" in the stage of red hepatization.

Nothing particular to observe on the part of the other viscera, except at the point of the right lobe of the liver on the surface of which were found two grayish white nodules about the size of a pea; these nodules appeared to be tubercles. There was noticed in passing an asymmetrical arrangement of the cerebrum, which consisted in the existence of two sulci of Rolando and four ascending parallel convolutions, otherwise normal; patient did not present any cerebral symptoms.

We will only add a few comments on these observations, for we have nothing better to say than what was first written by M. Grancher. and later by M M. Beurmann and Brissaud. It is well to remark, however, that in a clinical point of view, certain signs appear clearly to appertain to "Massive Pneumonia," not exclusively it is true, but they may be recognized, at least, in variable degrees, in the diverse observations thus far published.

In these cases were observed complete matitè (dulness), (tamquam percussi femoris); no elasticity; entire disappearance of vibrations, also the bruit of the vesicular murmur, three signs which when they exist to this degree, are considered as pathognomic of abundant effusion into the pleural cavity; now it is demonstrated that they may moreover be found in "massive pneumonia." In the first case that we published, the so-called pleuritic signs were very clearly perceived, and on the other hand the expectoration pathognomic (of pneumonia) had disappeared, so that the error in diagnosis was almost inevitable, for we believed in the existence of a vast effusion surrounding the lung entire.

In these cases, then, there only remains to guide the clinician, the investigation of the mode of origin of accessory symptoms and especially those observed during the first period of attack, these phenomena are often overlooked and escape inquiry. And though one may observe pneumonic signs at the commencement, the later signs may be so modified and assume the behavior of those of pleuritis, that we may be led to suppose the existence of pleuro-pneumonia, or better perhaps an effusion secondary to pneumonia.

Now in doubtful or ambiguous cases we adopt the advice of M. Grancher, and we believe the only means of deciding this difficulty is to make an exploratory puncture.

If only blood and no other fluid flows away, if the free extremity of the trochar does not appear to travel loosely as in a cavity, the existence of "massive pneumonia" is strongly probable.

It is necessary nevertheless to hold in mind the cases in which false membranes may obstruct the instrument—the above is an example.

Regarding chronic pneumonia analogous to that just described in the second observation, the cases are still too few in number and too incomplete to allow of long discussion.

However this case appeared to demonstrate that even in chronic pneumonia, when the air cannot penetrate deeply into the bronchi, one may sometimes recognize on the one hand distinct pleuritic signs, absolute matitè (dulness), almost total disappearance of vesicular murmur and thoracic vibrations, and on the other the absence of signs which ordinarily indicate induration or pulmonary condensation, namely, blowing, bronchophony, etc. So in the cases of chronic "massive pneumonia" which we presented, there were strong adhesions but no effusions.

We add in concluding that of these two cases of "massive pneumonia," the one, acute, was developed in an inebriate, the other, chronic, in an old man.

BOOK REVIEWS.

ANATOMICAL STUDIES UPON BRAINS OF CRIMINALS, A CONTRIBUTION TO ANTHROPOLOGY, MEDICINAL JURISPRUDENCE, AND PSYCHOLOGY. By Moriz Benedikt, Professor at Vienna. Translated from the German by E. P. Fowler, M. D. Cloth; pages, 185. New York: Wm. Wood & Co., 1881.

It certainly cannot be said of this work that it contains nothing new. Professor Benedikt has carefully studied the brains of twenty-two criminals, whose past history was more or less fully known. All these were found to be abnormal. The principal abnormality consisted in the marked confluence of the fissures. The author concludes, (1) that there is a necessity of establishing a type of confluent fissures, and (2) that the brains of criminals belong to this type: It was especially noticeable that the sulcus interparietalis communicated very frequently with the fossa sylvii, and the parieto-occipitalis with the horizontalis and the interparietalis.

The author summarizes his work in the following proposition: "The brains of criminals exhibit a deviation from the normal type, and criminals are to be viewed as an anthropological variety of their species, at least among the cultured races." The fact, that this subject requires most extensive investigation before any positive decision can be reached, is recognized, and Professor Benedikt expresses the hope that many observers in different countries will continue investigations in this line.

The importance of this subject can hardly be over-estimated, and Professor Benedikt's little volume should receive careful study from all who are in any way concerned with the examination of criminals. Important questions will arise in great numbers from the impetus which this work promises to give to investigation. Just how far is the criminal responsible for his actions? Admitting that every criminal has a deformity of the brain, what are the wisest methods of dealing with these classes? Will the fear of capital punishment aid in restraining their natural propensities to evil?

Every member of the medical profession should be familiar with the facts taught in Professor Benedikt's monograph.

A MANUAL ON DISEASES OF THE EYE AND EAR FOR THE USE OF STUDENTS AND PRACTITIONERS. By W. F. Mittendorf, M. D., Surgeon to the New York Eye and Ear Infirmary; Ophthalmic Surgeon to Bellevue Hospital Outdoor-Department; Assistant to the Chair of Ophthalmology and Otology, Bellevue Hospital Medical College. Fully illustrated with colored lithographs and woodcuts. New York: G. P. Putnam's Sons, 27 and 29 West Twenty-third street, 1881.

This new claimant of the attention of the student of ophthalmology and otology deserves especial notice. Works on these subjects are numerous, in fact *too* numerous, owing to the circumstance that the commercial interest of publishers leads them to reproduce works which long since have had their day, and which are now far behind the times, though they may have been among the foremost at the time of their first edition. We hold to the somewhat rigid creed, that a medical work should not be published unless it embodies new and valuable *original* ideas of the author, or unless it contains, in a collated form, all the results of medical progress, obtained since the publication of other reputable works on the subject. The work before us does not pretend to much originality, but it fulfils the second condition of its *raison d'être* in a very fair manner. The author has conscientiously followed the progress of his specialty, and has unostentatiously embodied his gleanings in this work. There is plenty of internal evidence testifying to that fact. For everywhere we find traces of his reading of Continental, especially German, authors. Thus we see, side by side, with our American pharmaceutical remedies, preparations recommended which it would be somewhat difficult for our practitioners to obtain impromptu, they being in use more generally on the continent of Europe. For instance: Tinctura opii crocata, callyrium stringens luteum, mucilago cydoniorum, and many others. Here and there also the author forgets to change the old fashioned German-Latin chemical terms into the modern ones. For instance: Zinci oxidati, unguent. benzoati, etc. These peculiarities may possibly cause some trouble to the inexperienced student or practitioner. Here and there we find some promising new departures of modern ophthalmology not touched upon by the author. For instance: The treatment of scleritis by scarification, the therapeutic lessening of intraocular pressure in glaucoma, by belladonna; the application of atropia in cosmoline, to avoid its entrance into the puncta lachrymalia, and consequent constitutional symptoms; the treatment of trachoma by alcohol and acetate of lead; of abscess and rodent ulcer, or adventitious growths of the cornea by the actual cautery, etc. But, although the book is not perfect, in this respect, it certainly holds the foremost rank among those which have come to our notice, and we doubt not that a second edition will bring it still more abreast of the times. The otological part is fairly good, and calls for no special comment. The whole work is written in a clear, terse, practical manner, giving satisfactory reasons and explanations wherever required. The arrangement is based on the anatomical location of the diseases. The descriptions of the operations are very clear and would be still more so if the publisher had done the author justice in the matter of illustrations. But their absence is painfully felt. Many a work of much inferior merit is a great deal better illustrated by woodcuts. On the other hand the colored lithographic tables, illustrating the diseases of the eye and ear are most excellent. In conclusion we insist again on the fact that the purchaser of this book acquires a work that will place his knowledge of the subject where it should be, namely, in a line with the progress made, down to the very latest day, by specialists both of the old and new world.

SCRIBNER for October. Century Company, 743 Broadway, New York. Subscription Price $4.00, single numbers 35 cents.

The October number ends Volume XXII of this deservedly popular magazine. Those who think that Scribner was as good as it could be made will be both surprised and pleased to learn what the intention of the publishers is. We quote from the the prospectus: "The Century Magazine will be, in fact, a *new*, enlarged, and improved." Scribner, in whose conduct the managers of that magazine will be able to profit by the experience of the last eleven years. In appearance the magazine will remain much the same, the large and clear style of type, which is one of its distinguishing features, being retained, though the type itself will be entirely new. The page will, however, be somewhat larger and wider, admitting pictures of a larger size, and virtually increasing the reading matter to the extent of about fourteen additional pages. The intentions of the new firm are praiseworthy and the magazine will undoubtedly continue to be as popular under the new name as it was under its old name and managers.

CHART OF CRANIAL NERVES. By Professor Geo. B. Ayres, M. D., Professor of Anatomy in the Omaha Medical School.

This is the best "chart" of these nerves that we have seen. Price 10 cents.

SELECTED ABSTRACTS.

REMARKS ON ANTISEPTIC DRESSING.*

BY W. W. GREENE, M. D.,
Professor of Surgery in the Maine Medical School.

Mr. President and Gentlemen: In the first place, allow me to make an apology, or rather an explanation.

I am reminded by my friend, Sir Henry Thompson, that during the discussion of lithotrity on Saturday I did not respond when my name was called. As both he and the secretary assure me that I was called, I must believe it. But during the whole discussion I sat near the chair, and neither myself nor Professor Otis, who sat by my side, heard it.

It is not that the discussion thereby lost anything of value, but because I had especially promised Sir Henry, as well as yourself, to state some facts within my knowledge, that I make this explanation.

In the discussion of this question of the healing of wounds, than which, in my opinion, none of greater importance has occupied the time of the Surgical section, the great need is the expression of individual conclusions and opinions from those whose experience and observation has been sufficient to give their deductions weight.

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*This address was given at the late International Medical Congress in London and is the last contribution from the gifted author whose death is mentioned on another page.—Editor of The Physician and Surgeon.

There is no time, nor is there any need, in a presence like this, to argue those points that have been presented in the able papers just read.

In the first place, sir, I desire to be clearly understood as to my position with regard to "Antiseptic Surgery." It has come to pass, accidentally, no doubt, that if a surgeon does not accept, in all its details, the method of dressing wounds known as "Lister's Method;" if he does not use the spray, and carbolic acid solution for the spray, and all the other elements in Professor Lister's dressing, he is counted as opposed to, or at least as not practicing, antiseptic surgery. All through the discussions in this body during the past week no allusion, in my hearing, has been made to *antisepsis* in surgery, except under the name of Listerism. And every member will bear me witness that whenever the details of that method have been alluded to, *carbolic acid* and *the spray* have been almost the only elements spoken of, and the only ones emphasized.

Now, sir, I protest most emphatically against being placed in any such false position. It is very much like calling a man an allopathist simply because he is not a homœopathist. I believe no thoughtful surgeon to-day denies the value, the desirability, of the most perfect antisepsis, and, better still, asepsis possible. But the question with us all is how best to fulfil these conditions or attain to them with the greatest safety to our patients. I suppose we have all been trying to solve this question; each in his own way. During an active practice, which for fifteen years has been very distinctly surgical, I have gradually been led to the following conclusions:

(1) *That wounds are more certain to heal by first intention if thoroughly excluded from the air: and that for such exclusion fine cotton-wool, absorbent or not according to circumstances, is the best agent.*

It is true that superficial wounds, like those for removal of cancer of the lip, or for closure of hare-lip, heal perfectly well, if nicely apposed, with no artificial dressing whatever. But nature teaches us a lesson in all these cases by immediately furnishing such a covering of blood and lymph as when dried is perfectly air-proof. And I am sure that all important wounds, like those of amputations, excisions, the removal of large tumors and similar operations, do best when covered in from atmospheric contact. For such purpose the finest quality of cotton-wool is the best of any substance that I have found. It is light, elastic, and practically air-tight, for in a few minutes after it is applied to the closed wound it adheres to the surface by the drying sero-lymph that it absorbs.

Again, if you assume the *germ theory*, Professor Pasteur long ago proved that cotton-wool is a perfect filter for all germs or spores that may exist in the atmosphere.

(2) *That thorough drainage is an important element in the best dressing for healing by first intention.*

It is true that if you by accurate apposition of the flaps and the thorough exclusion of air, immediately put the deeper parts in the condition of a subcutaneous wound, the tissues will very often take care of serum, etc. And, as Mr. Keith said the other day, in speaking of peritoneal surgery, each case must be taken on its own merits. After perfect cleansing, and perfect control of hemorrhage, just so far as we secure accurate co-aptation of the parts, so far we do away with the need of drainage. But where we must leave cavities, union is facilitated by proper drainage. I think this matter is being overdone, however, by many enthusiastic followers of Chassaignac, using tubes so large and retaining them *in situ* so long that they, acting as foreign bodies, hinder the simple processes of nature.

For this purpose I prefer hair drains whenever applicable, as in small or superficial cavities, as after removal of tumors, excision of the mamma, and in amputations. I speak of course of *primary* drainage; for the removal of the bloody serum that flows directly after the wound is closed. After intra-peritoneal operations, when needed, I prefer glass or de-calcified bone. Rubber tubes I dislike for any purpose. True enough, they will often serve. So would almost anything. But they are too soft to withstand the compression from the dressings, and too frequently become clogged and seriously filthy.

(3) *That whatever be used for cleansing the parts during any important operation, whether by sponging or irrigation, and whether pure water or a solution of any medicinal substance be employed, it should be of the same temperature or a little higher than that of the body.*

I was exceedingly interested in the statements of Professors Buchanan, Royet, and others, on Thursday, as to the value of maintaining the normal temperature of the body during abdominal section for any purpose. I believe that in years gone by I have lost several patients from failure to do this. The importance of this point grows upon me constantly with reflection. I mean the importance of *more powerful measures* than the heat of topical applications. But every gentleman present, and there are several of my former colleagues who are familiar with my practice, will bear me witness that I have long recognized and applied the principle locally. I try to avoid all chilling the parts, and prefer the styptic influence of hot to that of cold applications.

(4) *That for the control of hemorrhage, ligatures of some animal material, rendered as aseptic as possible, are best; and that they should be used so freely as to make the wound dry so far as hemorrhage proper is concerned.*

What the material for ligatures will be in the future is doubtful. I was surprised to hear Dr. Marcey's testimony in favor of the Caribou's tendon, for last winter I tried to split up the tendon of our common deer (*Cervus Virginianus*) and failed to get such nice parallel division as he reported. But whether catgut or some other material properly prepared will be the ligature of the future, I am inclined to think it will be animal.

To the final dressing I have already referred in my first proposition.

As to Professor Lister's method, or what has come to be generally called Listerism, I have to say that the elements of the greatest possible cleanliness, the use of animal ligatures, thorough drainage, and protection from atmospheric contact, have my most hearty endorsement, and I have for a long time employed these agencies. And I believe that in estimating the value of the system *as a whole, these several parts have been entirely under-estimated*, the spray and carbolic acid having taken the larger share of the credit.

I object to the spray, because I deem it wholly unnecessary. The parts involved, as well as the hands and instruments, can be kept completely moist with any antiseptic solution that may be employed.

It is not only, in my opinion, unnecessary, but its use, as practiced by Professor Lister, involves, not only at the time of operation, but in the often very early and frequent subsequent dressings, an amount of detail and finessing that is hardly practicable for a surgeon in a large private practice.

Again, I most positively object to carbolic acid. I have seen no evidence that an agent in solutions so powerful that in prolonged operations the surgeons' hands become stiff and numb for days, as has happened to myself, and to several gentlemen in this room, is a proper or safe one to apply to large exposed surfaces. On the contrary, I have seen much of carbolic acid poisoning; and I am very sure that the profession generally are not aware of the extent of this evil, especially in exciting disease of the kidneys. It has not been looked for.

So I was not surprised, as some of you were the other day, at Professor Keith's statement, that for four months past he had abandoned the use not only of the spray, but of carbolic acid, relying, as he says he does now, upon simple cleanliness, care about hemorrhage, and thorough drainage.

Now, sir, in America the success of Professor Keith as an ovariotomist since he began to use Listerism—and no one denies the thoroughness of his application of it—has been the *capital illustration* made use of by those who look upon the "Lister Method" as the only true antiseptic treatment, or proper treatment. And his statements only show how careful we must be to keep such broad questions open; how long, and large, and discriminating observation is necessary, before we can settle down upon fixed conclusions. What does he say? I read from the notes that I took of his slowly, modestly uttered words.

"True," he says, "I did have eighty successive recoveries after ovaritomy." "But too many of those came near dying." "I found a large number of cases having high temperature, 105–106–107 Fahrenheit, the evening following the operation, and many cases of renal disturbance. But while I had this remarkable succession of recoveries, that, *stopping there*, would be a wonderful statistical showing: *out of the next twenty-five I lost seven*, one of acute septicæmia, in spite of the most perfect antiseptic—Lister's—treatment; three others of kidney disease—one of hemorrhage—that were undoubtedly due to carbolic poisoning. For four months past I have abandoned the so-called antiseptic plan, and I am getting better results; am having less trouble than when using it. I look upon perfect drainage in proper cases as indispensable." And neither you, Mr. President, nor you, gentlemen of the surgical section, will soon forget the significant silence, for a few moments after these statements, before the professor—realizing the importance of this testimony, knowing that he had been quoted the world over as a most devout disciple of Lister, and as a man whose every statement stood unchallenged for truth and honesty—finally said: "I have felt it my duty, gentlemen, to make these statements, *because they are true*," and sat down.

I am inclined to think that, at least, in the atmosphere of large hospitals, especially old ones, and, indeed, *perhaps*, generally in private practice, it is best, though in private practice not absolutely necessary, to use some article in the water used for sponging or irrigation that is antiseptic and indeed germicidal. For some time I have used boracic acid, in saturated water solution, for this purpose, and have been well pleased with it. For although we talk about pure water a great deal, it is very rare, unless it has been recently boiled and is much more likely to be the medium of access of bacteria to the wound than air dust. Again, all this class of articles seem to have *some* quality which renders tissues less prone to inflammation. How? is the question. Whether as germ destroyers, or by some inhibitory influence by chemical action, which latter I think more likely, I feel sure such quality exists. But carbolic acid, over which the profession has gone wild, is not a germicide. It does not destroy bacteria. It paralyzes or anesthætizes them *while applied*. But let the fumes pass off, and they recover and become as lively as ever. But there are true germicides, that in potent strength lack the unfortunate qualities of carbolic acid—alcohol, chlorinated soda, salycilic acid, boracic acid, permanganate of potash, ozone; these are familiar illustrations. Offensive or irritant qualities are no evidence of therapeutic power in a substance, nor is the lack of such quality evidence of inertness.

One thing, however, must be said for carbolic acid. It is a prophylactic against inflammation, and a useful remedy in certain painful inflammatory and ulcerative processes. But it is too energetic for application to raw surfaces.

As I said in the beginning, this is a time for the statement of facts within our knowledge and of individual opinions based thereupon. So to conclude, let me say, that so far as the local management of wounds best calculated to secure union by first intention is concerned, I at present prefer the plan I have indicated, *keeping the whole question wide open for any new light in the future.*

I have not alluded to, but we must never forget, the all-important matters of the patient's surroundings, and of constitutional conditions and treatment.

(1) The greatest possible cleanliness in every respect from first to last.

(2) The use of aseptic animal ligatures in sufficient numbers to control *all* hemorrhage.

(3) Thorough drainage, used with discrimination as to different methods in different cases and as to time of retention of drain.

(4) The maintenance of the normal temperature of the parts during the operation. For which purpose use warm water—better to have been boiled—with some such article in solution of germicidal strength, as chlorine, boracic acid, salycilic acid, etc.; although I do not consider this last recommendation absolutely essential, especially in private practice.

(5) Accurate, firm apposition by a *sufficient number* of sutures of some non-irritating material, such as hair, perfectly waxed silk, or metallic thread.

(6) And finally. The perfect covering of the parts with light compresses of pure cotton-wool supported by proper bandages. Where there is to be much oozing, absorbent cotton should be applied next to the surface to take up the contents of the drains. Otherwise, nice wadding is sufficient.

Before closing, I wish, while I cannot accept all the details of his method, to bear hearty witness to the good effects of Professor Lister's work upon modern surgery.

The attention of the profession has been called, as never before, to the practice of *cleanliness* and *care*—care about drainage, hemorrhage, etc. Especially has the beneficence of his teachings and example shown itself in large and old hospitals. The air is kept purer, everything is done more neatly and carefully in the way of dressing. All praise and honor for this. And if the learned Professor [Lister], who himself is to close this discussion, shall be able to show us the need, on the one hand, and the safety, on the other, of those elements in his system to which I have objected, no one will be more glad to be convinced of the truth than I.

I thank you, Mr. President and gentlemen, for your kind attention.

THE

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ORIGINAL ARTICLES.

CASE OF DYSENTERY.

BY W. H. SMITH, M. D., PH. D., SAINT CLAIR, MICHIGAN.

August 23, C. S., aged nine, came under my treatment with endemic dysentery. The discharges contained a large amount of green, bilious matter with considerable blood. He was at once given a dose of blue mass and rhubarb. This was followed by the fluid extract of baptisia tinctoria. After these had been allowed to operate for twenty-four hours, the boy was put on quarter grain doses of opium combined with three-fourths grain of acetate of lead every three hours. As the disease appeared to be somewhat periodic one and one-half grains of quinine was administered once in three hours, and hamamelis fluid extract was given in drop doses every hour for the purpose of correcting the flow of blood.

Having seen injections of chloral highly commended in medical journals as an abortant of dysentery, five grains were administered in enema, but proved too irritating to be retained. The mixture of chlorate of potassium and Peruvian bark mentioned in THE PHYSICIAN AND SURGEON of August, 1880, was tried, but nauseated to such an extent as to necessitate its abandonment. Enemas of laudanum and starch were injected thrice daily and appeared to do good. Tepid water, to be used each succeeding time at a lower temperature, was ordered to be thrown into the bowels after each evacuation. To relieve the nausea present in the case, aromatic spirits of ammonia and ipecac were used. A small amount of liquid nourishment was given and followed by lactopeptine in order to facilitate its digestion. Fomentations to the abdomen, not being necessary for the relief of pain, were omitted. The bed-pan was used a few times and abandoned for the chamber, as the latter seemed to cause so much less straining and annoyance.

The above method of treatment continued for two days. At first the boy grew steadily worse, but on Friday, August 26, he showed slight signs of improvement. Then the boy's father suggested that he would like to have their former family physician's opinion upon the case. I told him that the boy seemed better, but that I was willing to consult with any reputable medical man whom they might name.

Friday forenoon while I was in the country upon a visit to another patient he communicated by telephone with Dr. C. M. Stockwell, of Port Huron, who, after learning what had been my mode of treatment, sent down the following prescriptions:

℞.	Olei ricini....................................	℥j.
	Olei terebinthin................................	ʒij.
	Tincturæ opii camphor................	ʒj.
	Gummi acaciæ................................	ʒij.
	Syr. limonis q. s..............................	℥jv.

M. S. Dessertspoonful once in three hours. Also chloroform ℥j ss. dissolved in Oj alcohol to be applied to the abdomen.

Upon my return I communicated with Dr. Stockwell by telephone and in deference to the family's wishes assented to the application of the chloroform mixture and gave the turpentine mixture in place of the opium and lead though diminishing one-half the amount of oil. The mixture appeared to nauseate the patient and the disease seemed to grow worse. As a consequence the family were enjoined to diminish the dose, and, if the nauseating effect still followed, to discontinue the medicine. The result was the use of the oil mixture in teaspoonful doses once in six hours.

The next day, in accordance with the family's wishes, I met Dr. Stockwell at the patient's bedside. The doctor stated that in his opinion the acetate of lead was objectionable on account of its tendency to produce paralysis of the bowels. He also stated that he preferred the vegetable to mineral astringents, and held the view that opium was hurtful in these diseases from its power of diminishing or locking up the secretions of the liver and pancreas. He frankly admitted that on these points he was not in accord with the profession, but claimed that his experience fully justified his positions.

Of the above, the doctor's objection to the acetate of lead appeared to me to be well founded. This is certainly a dangerous remedy and I had only been led to its use through the high commendations, given to it in medical publications. However, it seemed to me that the employment of turpentine in the case, owing to the possible effect upon the urinary organs, was open to serious objection. In the conference between us, at which Mr. S. was present, Dr. Stockwell proposed the following treatment: (1) the oil mixture, already mentioned, with the paragoric omitted, to be given once in three hours, (2) injections of hot water into the bowels daily, and also

℞.	Quiniæ sulphatis	grs. j ss.
	Bismuthi subcarbonatis	grs. v.
	Leptandrin	gr. ¼.
	Camphoræ monobromatis	gr. j. M.

For one capsule to be repeated once in three hours.

℞.	Olei theobromæ	ʒj.
	Bismuthi subcarbonatis	grs. v.
	Pulveris opii	gr. ss.

To be made into a suppositorium and used after each dejection. The hamamelis, lactopeptine and aromatic spirits of ammonia to be continued. After suggesting that the opium introduced *per anum* would check secretions, to which he replied that its use was intended merely for local effect, I, deferring to him and the family, assented to the change and the boy was put upon the proposed treatment.

The doctor also made one statement which was new to me, and is worthy of being made known. It was to the effect that they did not have dysentery in Port Huron, and he remarked good naturedly that, while he did not wish to get the patient away from me; yet if the boy was removed to that city he would be more readily curable. The difference in this respect between Saint Clair and Port Huron must be, in his opinion, due to a different condition of sanitation. Upon being asked by Mr. S. what he considered the patient's chances of recovery, Dr. Stockwell replied that, if the course of treatment which he had recommended were followed, he believed the boy would get well.

At first, after the change, the turpentine and oil nauseated and the dose was reduced one-half. This was with difficulty retained. The patient's condition remained the same for about twenty-four hours when he again evinced signs of improvement. From this time on he showed stages of advancement with periods of retrogression, but on the whole continued to progress slowly. The number of hot water enemas was increased to two a day and the oil and turpentine mixture thus administered. Later nitrate of silver was thus used and finally nux vomica and columbo given as tonics. The boy continued to progress, and on Sunday, September 4, seemed so well that I discontinued my visits.

This case has appeared to me worth reporting, as it shows in a single instance the inefficiency of much of the medication employed. Of all the medicines exhibited only quinine and opium seemed to me in my daily visits to be unquestionably beneficial. The latter was effective when used as an injection, but accomplished the most good in the form of a suppository. That the other drugs were absolutely worthless I do not assert. Theoretically the hamamelis, turpentine, nitrate of silver, bismuth and acetate of lead were good, but practically it was at least an open question whether any benefit resulted from their use. It is also my opinion that the exhibition of blue mass, rhubarb, lactopepsin, leptandrim, nux vomica and columbo was to the patient's advantage, but of this I have no positive proof. The disease ran its usual course seemingly but slightly influenced by medicine, and the patient recovered after the customary period apparently more owing to good nursing and its intrinsic tendency than to the action of drugs.

CHRONIC SUPPURATIVE CYSTITIS: WITH ILLUSTRATIVE CASES.

BY VICTOR C. VAUGHAN, M. D.,
Assistant Professor of Physiological Chemistry in the University of Michigan.

The discussion of this subject lies in that border land between the provinces of medicine and surgery, and for this reason the majority of works, to which the general practitioner has access, either fails to mention it or treats it in the most superficial manner. Of the works on practice at the command of the writer, the following recent writers do not refer to the disease: Bartholow, Flint and Fenwick. Roberts and Bristowe have short articles. Of the older authors, Mackintosh, Eberle, Bell and Stokes, Tweedle, Dunglison, Wood, Lebert, Thacher, Gregory, Dickinson and Tanner have short notices; the majority advocating extensive blood letting as the chief measure. Watson, Gardner and Graves and Gerhart have nothing. Bennet treats of ulceration of the bladder and Trosseau discusses irritability as a cause of incontinence of urine. Ziemssen has nothing; while Reynolds' Cyclopœdia has a short but valuable article by Sir Henry Thompson. The standard works upon surgery are not much more satisfactory, but it is not necessary to refer to them in detail, as this paper considers only the medical treatment of the disease. For any extensive information on the subject, special works must be consulted, and these are not very numerous. Probably the best is a small work by Sir Henry Thompson on the "Urinary Organs."

When we consider that this is a most common and a very troublesome disease, we conclude that it should receive more attention. Each neighborhood contains from one to a dozen persons who are troubled more or less by chronic inflammation of the bladder. Physicians too often are not able to give any encouragement to such patients, who are taught to content themselves as best they may with the suffering and inconvenience accompanying the disease. This is not as it should be; for while much time and close attention to particulars are necessary, the treatment of chronic suppurative cystitis is, in the vast majority of cases, most satisfactory.

Causes.—The writer will not endeavor to make this paper exhaustive, but the object is to point out some things that may be of practical value. We would classify the causes as follows: (1) Those connected with some abnormal condition of the urine when it enters the bladder; (2) Those in which the primary lesion is to be found in some of the anatomical structures of the bladder or its immediate appendages; (3) Those in which the primary lesion exists outside the bladder; (4) The introduction of foreign bodies.

Under the first class, unduly acid and highly concentrated urine is probably the most frequent cause of cystitis. Such urine irritates the mucous membrane of the bladder and finally causes chronic inflammation. Again it is from such urine that oxalate of lime and uric acid are most likely to be deposited in the urinary passages. The irritation produces an excess of mucus and this mucus has the property of hastening the crystallization of oxalate of lime in the urine. The passage of alkaline urine into the bladder is often credited with being a cause of cystitis. When the alkalinity is due to a fixed alkali, no danger of irritation need be feared. Such urine is bland and soothing instead of irritating to the mucous membrane. It is true that this urine constantly contains a deposit of amorphous phosphates, but these do not aggregate and form stone as the triple phosphates do. The writer has kept the urine of patients alkaline with sodium carbonate for months without any evil results. While the constant secretion of such urine (when not due to the administration of alkali) is indicative of general debility or lowered vitality, it is not a cause of inflammation of the bladder. The passage of ammoniacal urine from the kidney into the bladder would soon lead to inflammation of the latter. But this very rarely happens. It has been known to occur after occlusion of the ureter has been relieved and in some extraordinary cases of pyelitis; also in a few instances of extreme fever, the urea is converted into ammonium carbonate while yet in the blood. Even when the urine in the bladder is ammoniacal the original cause is frequently the undue acidity of the urine when it enters that organ.

Another of this class of causes is the passage of a calculus or of gravel into the bladder. The foreign body soon sets up a degree of irritation sufficient to produce suppuration.

Prominent among the second class of causes is inflammation of the neck of the bladder from sudden cold, gonorrhœa and sexual excesses. Often times the neck of the bladder becomes so badly inflamed as to interfere materially with micturition. Ulcers may form and require the use of caustics for their removal. The mucus and pus poured out decompose the urea and calculi of triple phosphate may be formed. By the introduction of unclean catheters ferments are often introduced, though vibrios have been found in bladders into which no instruments have been introduced.

Stricture of the urethra not unfrequently causes partial retention of urine which decomposes and inflames the lining membrane of the bladder. If the retention be complete the aid of the surgeon is secured; while partial retention would be neglected or might not be recognized. The hypertrophied prostate of old age may cause retention of urine which decomposes and produces cystitis. The hypertrophied prostate is not found in patients under fifty years of age, and the physician must be careful to distinguish between hypertrophy and inflammation of the prostate.

Pyelitis may extend down into the bladder, as cystitis more frequently extends upwards to the kidney.

Of cases in which the primary lesion lies wholly outside of the bladder, injury to the spine, with consequent paralysis of the walls of the bladder and retention of urine, is chief in male subjects; while displacements of the uterus most frequently give trouble in the female. In retention of urine in the female a vaginal examination should always be made. A displaced uterus may so press upon the urethra or neck of the bladder as to cause partial retention.

Any foreign body remaining in the bladder would soon lead to suppuration. Many kinds of strange things are introduced into the bladder. Especially is this the case in the female where the urethra is short and large. Dr. Wheeler reports a case (THE PHYSICIAN AND SURGEON, Volume I, page 262) in which an ordinary button-hook was introduced, retained for two weeks and then passed during micturition. Dr. Harrison (*London Lancet*, August 11, 1877) removed from the bladder of a man a pencil case three and one-half inches long and one-fourth of an inch in diameter. Professor Maclean removed a stone having a nucleus of chewing gum, which the patient, a boy ten or twelve years old, acknowledged having introduced two or three years before; also a stone with a small stick as a nucleus, from an old man. The number of such instances could be multiplied indefinitely.

Diagnosis.—Pus in the urine may be detected by the microscope, or when in large amounts by the unaided eye. It only remains to determine what part of the urinary tract has furnished the pus. When it is small in amount it may come from the urethra, bladder or kidney. If it be from the urethra only, this may be determined by the history of the case, or with certainty by collecting separately the first few drachms of urine passed. If the pus be from the urethra only the first urine passed will contain all or at least the greater part of it; while if from the bladder or kidney it will be more evenly distributed. When there is but little pus it is often difficult to decide with certainty whether it be from the kidney or bladder. In deciding this point the epithelium and the symptoms must aid us. The kidney never, save in case of abscess, furnishes by itself enough pus to form a heavy, ropy deposit. When there is a large quantity of pus it may come from the bladder, kidney (in case of abscess) or from a psoas abscess which has broken into the bladder. These abscesses can, of course, discharge only occasionally. Though there may be abscesses in the bladder which may render this point of no value in making a deferential diagnosis. In the first stage of cystitis there is generally more or less pain or aching over the symphisis pubis and some smarting as the walls of the bladder close in micturition. In severe cases the mucus and pus come away in ropy masses after the greater part of the urine has passed. The question of the presence or absence of a stone could be decided by the symptoms or with certainty by sounding the bladder.

Treatment.—In the first place it is necessary to withdraw any cause of irritation. If a stone or other foreign body be present it must be removed. Remedies must be administered which will constantly keep the urine as it enters the bladder bland. As a rule it is well to dilute the urine largely by the aid of diuretics. Pure water is one of the most valuable of this class. The Waukesha, Wisconsin, water is excellent as the patient can drink large quantities of it without producing any disturbance of digestion. Then there is a class of remedies which combines a diuretic action with special healing effect upon the mucous membrane. To this class belong buchu, triticum repens, slippery elm, flaxseed, uva ursi and pareira. The writer thinks the comparative value of these exists in the order of their mention. To accomplish any good with these remedies they must be used in large quantities. The conventional tablespoonful will be of no avail. Buchu should be used in infusion and at least one pint per day. It is often well to add to the pint of buchu infusion from thirty to sixty grains of the bicarbonate of sodium. There may be also added from twenty to forty drops of balsam of copaiba, or this may be given separately and in capsules to avoid its very disagreeable taste; or from ten to thirty drops of fluid extract of hyoscyamus may be added to the buchu. One of the other remedies might be substituted occasionally for the buchu. It is better to change occasionally than to disgust the taste of the patient by the long continued administration of one remedy. The patient, as a rule, should be told to purchase the leaves and taught to prepare the infusion. This may be quite a saving in cases where it is necessary to use the remedy for six months or a year. The best form for the administration of the couch grass is that recommended by Sir Henry Thompson and is as follows: "Boil four ounces of triticum repens in a quart of water, gently reducing it to a pint; strain and cool; let a third part be taken three times per day." The flax seed should be given as tea. These three are the only remedies of the class used by the writer. To relieve pain, hot poultices with a thin layer of mustard over the bladder and rectal suppositories of atropia and morphia may be used with great benefit. The treatment already outlined will in many cases be sufficient; in others it will be necessary to make injections into the bladder. Two cases which appear quite similar may demand very different treatment as will appear from the following condensed report of three cases.

Illustrative Cases.—Mr. D. Ann Arbor, a merchant, age forty-two, was seen September 2, 1880. He had been troubled with cystitis for about four months. The urine was slightly acid and contained a large quantity of ropy mucus and pus. There was great pain on micturition and pressure against the perinæum showed that the neck of the bladder was greatly inflamed. He had been washing out the bladder frequently with the aid of a catheter. He was too young a man to have hypertrophied prostate so any further use of the instrument was strictly forbidden. Its passage had only served to heighten the inflammation at the neck of the bladder. The patient was kept in bed (up to this time he had continued at his business and necessarily on his feet much of the time) hot cloths with a thin layer of mustard were placed over the bladder and bound against the perinæum. Each night a suppository containing 1-40 grain atropia sulphate was used. One pint of buchu infusion (or of triticum repens) with a teaspoonful of bicarbonate of sodium and from ten to forty drops of fluid extract of hyoscyamus was taken each day. The patient drank ad libitum of the Waukesha water. After three weeks the deposit had wholly disappeared from the urine and the patient went east to purchase his goods. The water and buchu in smaller quantities were continued for some months.

(2) Mr. B. of South Lyons, aged twenty-nine, a carpenter, had been troubled with cystitis for nearly a year. He had had excellent treatment with buchu and other diuretics. The urine was very similar to that of Mr. D., as were also the symptoms. I followed the same treatment for nearly two months without any marked improvement. Then injections of biborate of soda, quinine, salicylic acid, etc., were tried without any benefit. Finally two ounces of solution of silver nitrate, five grains to the ounce were injected. The bladder was washed and the patient placed for ten or fifteen minutes in a sitz bath, as hot as he could bear it, then placed in bed. Once a week the injection was repeated, the strength of the solution being increased by five grains to the ounce each time. The pus rapidly disappeared, and by the time the injections had reached a strength of thirty grains to the ounce, there was no longer any deposit.

This treatment might be called heroic; but the patient did not complain of any great pain from the injections. This treatment was recommended first, so far as the writer knows; by Dr. Ford of Saint Louis, who recommends that the paitent have some morphine before the injection of silver nitrate is made.

(3) Mr. F., Beloit, Wisconsin, aged sixty-eight, came to me May 13, 1881. He had had cystitis from the first of January, when it came on from cold. He had been treated for kidney disease. The buchu with soda and balsam copaibia gave entire relief in two weeks. This case showed a remarkable readiness to heal.

Other cases, each having its own peculiarity might be mentioned, but these are sufficient to show, as in every other disease, each case must be treated on its own merits. No one formula will do for all cases of cystitis. We must select the remedies for each case, and not put our faith in cast iron formulæ which are to be given just the same in every case of a certain disease.

CASES FROM PRACTICE.

BY J. A. BEEBE, M. D., WESTFIELD, NEW YORK.

Extensive injury to brain: Recovery.—F. R., age six years, received on October 1, a kick from a small colt, directly in the middle of the forehead.

Compound comminuted fracture of both tables of frontal bone, rupture of membranes of brain with disorganization of anterior and inner quadrant of left cerebral mass resulted. The anterior cerebral artery of injured side of brain lay in view at bottom of wound. Spiculæ of bone were driven into both hemispheres.

Upper half and right lateral side of frontal bone were deeply depressed. Pulse tardy, surface cold, pupils slightly dilated, breathing slow, *consciousness perfect* and *memory unimpaired.* Myself and assistant noticed these facts, and also that three drops of chloroform completely anæsthetized the patient.

Fragments were removed, depressed tables raised some, but not entirely as circumstances precluded complete restoration of form of bone. Sutures to crescent shaped incision through frontal muscle, cold water dressing. Patient has never lost consciousness nor felt much pain. No paralysis, nor other noticable nervous disorder.

To-day, October 14, he is sitting up, eats heartily and almost complete recovery of form of forehead seems certain. Integumentary wound healed.

Speedy recovery after apparently extensive injury to eye.—W. C. aged fourteen, received a severe blow in right eye from hard apple thrown by playmate. Ecchymosis, pain, total loss of vision.

Examinations showed pupil of injured eye widely dilated, conjunctival and sclerotic vessels engorged and blood from internal vessels completely filling anterior chamber. Atropia sulphate, five grains, to distilled water, one ounce, was instilled. Compress, wet with morphia sulphate, in solution of cold water, completed local treatment. Saline cathartic, restricted diet and complete rest ordered.

At second dressing, but sixteen hours after injury, pupil dilated, cornea clear, blood entirely absorbed. Vision nearly normal, no photophobia, conjunctival vessels congested. In three days, patient was dismissed entirely well.

Attention is called to speedy absorption of so large a quantity of blood, and to simplicity of treatment.

EDITORIAL BRIEFS.

The degree of LL. D. was conferred upon Professor Flint by Yale last June.

Professor Maclean has performed six ovariotomies, with five recoveries, during the past four months. A report of these cases will shortly appear in this journal.

Professor A. B. Palmer's work upon the "Theory and Practice of Medicine" has been turned over to the publishers and will be upon the market in a few months.

Professor Beneke has ascertained experimentally that the body loses by the growth of the hair, beard and nails, 0.0369 gram of nitrogen per day. This corresponds to 0.0798 gram of urea.

"Whom the gods wish to destroy they first make mad." So quotes Mulheron. Mulheron has been very mad for a long time. The gods pay no attention to him or his madness. He is evidently godforsaken.

James R. Osgood & Co. have in press a "Practical Treatise on the Diseases of Women," by Dr. Joseph H. Warren. The author has shown himself in his late work on hernia to be a clear and thorough writer.

The ninth annual session of the American Public Health Association will be held at Savannah, Georgia, November 29 to December 2, inclusive. This association is doing a good and much needed work. Some very valuable papers are expected at this meeting.

Dr. Mulheron thinks the gods intend to destroy Frothingham. It is an honor to be destroyed by the gods. The gods will have nothing to do with Mulheron; envy, hatred, jealousy and malice will destroy him.

Predictions are made that the introduction of convallaria majalis will mark an era of advance in the therapy of heart disease. The fullest and the first description of this remedy (in an American journal) appeared in our August issue from our Russian translator.

Our old visitor, *The Atlanta Medical and Surgical Journal* has a new name, a new dress and new editors. It is now known as *The Atlanta Medical Register*, and is edited by Drs. Johnson and Baird. We must say that the first number under the new management is an improvement upon the preceding numbers.

Dr. Mulheron does not seem to understand who is meant by the pronoun "we" in Dr. Frothingham's letter. If he does not the fault is his own. The "English" is good enough. In fact it is too good English for Dr. Mulheron and shows what a hypocrite and slanderer he is, and whose dirty work he is doing.

Dr. Frothingham did not intimate in his first letter that the giving of the certificates was an offense of the code. The use made of them was a betrayal of confidence, and that too by a person whom no one would have suspected as capable of putting them to such a base use. It was this that Dr. Frothingham said would make him less obliging in the future.

Dr. Mulheron prides himself on his English. He has heard the word Billingsgate and uses it without knowing apparently what it means. There was nothing in Dr. Frothingham's letter to which the term Billingsgate applies. It contained some unpleasant truths, perhaps, Mulheron thought that was Billingsgate. Perhaps, like Artemus Ward, he used it, because it sounded well.

When Dr. D. A. Joy called on Dr. Palmer for a certificate, Dr. Palmer had never made any practical application of the belt invented by Joy. He gave a certificate only stating that an examination showed that it would generate a mild current of electricity and that it would be useful where such a current was desired. In his letter to Dr. Mulheron he says he subsequently tried it in one case and the result was a failure. Mulheron tries to prove from this that the certificate was given with a view to deceive the manufacturer. To such straits is the mad and libelous Mulheron driven in trying to sustain his false accusations.

Dr. Mulheron tries to make a man of straw and then knock it down when he answers the charge of advertising Dr. Jack's Santonine Lozenges as a *sure* cure for worms. If santonine is a remedy recognized in the pharmacopœa it is not recognized as a *sure* cure, and it is the worst form of quackery for a medical journal to advertise an article that is sold as a patent medicine in the market, and making this claim. He thinks an editor should not be responsible for such things. Perhaps his "animus" is, after all, resentment that Wagner & Co. did not advertise in his journal. The "scrotal attachment" is not so dangerous and is no more quackish than to advertise one-half grain doses of santonine as a *sure cure* for worms in children, without regard to age or condition.

Mulheron cites the fact that Dr. Dunster was on the list of associate editors of the *News*, and intimates that it was a favor to the faculty. Just the opposite was the case. Dr. Dunster allowed his name to be put on after urgent solicitations by Dr. Mulheron and his friends, because they thought it would aid the journal. The faculty do not regard the aid extended then as a subsidy. Nor do they attempt to control the editor, but they do think that no one having so high a regard for honor as the editor of the *News* professes, would, with no cause or provocation, unjustly and slanderously assail the reputations of those who had been his friends. No matter if Dr. Mulheron does now belong to the faculty of a school that may hope to benefit by the destruction of another. Honorable men do not stoop to such measures, however sharp competition may be.

"A Suit for Malpractice.—Some weeks ago Professor Donald Maclean, of the medical department of the University of Michigan, brought an action before a Justice of the Peace, of this city, to recover a fee for an operation on the wife of a Mr. Hayes. The defendant disputed payment on the plea that the operation had been ill-advised, and alleged that the result had been to render his wife a permanent invalid. The operation was undertaken for the relief of recto-vaginal fistula, and consisted in cutting through the body of the perinæum. It was unsuccessful from the fact that there was no union, and as a consequence there is prolapsus of the uterus and the rectum, and the patient is unable to assume the perpendicular position. It is alleged that surgeons in this city had refused to operate on account of the patient's general condition, and it is said that Mr. Hayes was present at the Justice Court prepared to adduce evidence in support of these allegations, but the plaintiff failed to put in an appearance, and was non-suited. *A discussion of the case followed in the public print,* [the italics are ours] and an action for $20,000 damages against Professor Maclean is the latest phase of the case.

"On general principles we sympathize with Professor Maclean, and trust that he may be able to convince the jury that the operation was not only justifiable, but that it was also properly performed. Suits of this nature are among the contingencies of surgical practice, and unfortunately doctors differ and juries are peculiar, their faith in medicine making it difficult for them to understand that it cannot always overcome the defects of nature.

"*We know nothing of the facts of this case outside of what is contained in the plaintiff's declaration*, [the italics are ours] but if it should really appear that the perineal body was divided there will unfortunately be the possibility of a diversity of expert testimony. The result may, therefore, be a repetition of court scenes such as the profession of this State, and other states, are already too familiar with. In view of this possibility we would respectfully ask for a careful re-reading of recent editorial articles in this journal. In all cases of this nature not only are the ends of justice to be observed but the reputation of the profession is to be sustained. We do not wish to intimate that in order to sustain this reputation it is necessary for witnesses to even shade their testimony in favor of the defendant, but it is necessary that there should be an entire absence of prejudice against either party in the suit. It is unfortunate that an unusual operation should be attended with untoward results, as in the case under consideration, but there are certain fundamental facts to be borne in mind in forming an opinion regarding it, and among these is the fact that surgeons who have examined the case are in a better position to judge of the necessity of any particular operation than are 'experts' whose opinions are based on a merely hypothetical case."—*Michigan Medical News.*

When Dr. Mulheron wrote the above, he no doubt congratulated himself upon the apparent ingenuity with which he tendered a "sop" to the profession, at the same time that he did all in his power to inflict a cowardly blow upon one of its members who happens to be a prominent professor in the institution, which of all others, Mulheron and his friends hope to see ruined and disgraced. A very slight scrutiny, however, will suffice to show Mulheron in his true character as a bungling, and untruthful special pleader, and a traitor to the profession with which he affects to sympathize on general principles. "*We know nothing of the facts of this case outside of what is contained in the plaintiff's declaration.*" So says the veracious editor, although in a previous sentence of the same article, he admits that a discussion of the case had appeared in the public print. The discussion in the public print was neither more nor less than a brief and unequivocal statement of Dr. Maclean's side of the case made over his own signature.

How could Mulheron be so utterly lost to all sense of truth and decency as to say that he knew only the plaintiff's side of the story, when in the same article he refers to Dr. Maclean's absolute disclaimer! Was there ever a more barefaced falsehood? Could there possibly be a more frivolous or sophistical excuse for *preferring* to give only the plaintiff's side? Surely his readers will *not* all approve of such uncandid treatment of *them*, to say nothing of Dr. Maclean's claims to decent consideration. The following is Dr. Maclean's part of the "*discussion*" to which Mulheron refers, but which he deliberately elected to ignore:

DR. MACLEAN DEFENDS HIMSELF.

To THE EDITOR OF THE EVENING NEWS: The brief fragment of my telegram published in your issue of Saturday was not calculated to do the object to which it referred anything like justice.

The subject of that dispatch was to inform any of your readers who might feel interested in the matter some important facts, namely:

(1) That I *absolutely deny all of the allegations* against my professional character made by W. B. Hayes and published in your issue of last Friday.

(2) That every one of the competent and reputable physicians who are in possession of all the facts in the case are prepared to testify that Mr. Hayes' allegations are *false, slanderous and outrageous.*

(3) That Mr. Hayes belongs to that queer class of capitalists that it does not pay to pursue, and hence the abandonment of my suit against him.

Lastly, that Mr. Hayes character is set forth in 86th Illinois, 487, by the supreme court of that state. DONALD MACLEAN.

ANN ARBOR, August 21, 1881.

The following is the relevant portion of the decision of the Court referred to:

"WILLIAM B. HAYES, Appellant,
VERSUS
EDWIN S. HOUSTON, Appelee.

Appeal from Circuit Court of Cook county.
Hon. Henry Booth, Judge.

Mr. Justice Breeze delivered the opinion of the Court.

To our minds the evidence discloses a transaction akin to the confidence game in which appellant (W. B. Hayes) and his principal witnesses, Langley and Wolf, were the chief actors. We are upon the whole record well satisfied there was a glaring fraud on the part of appellant, (W. B. Hayes) and helped on by confederates. The whole case shows to what base means some men will resort to obtain money or valuables."

This is the man whose allegations Dr. Mulheron so eagerly accepts when brought against a "*personal friend*" and a professional brother.

This is the party to whom the professor of materia medica and therapeutics in the Michigan College of Medicine is so eager to furnish all the aid and comfort, which his position as an editor and a professor enables him to furnish.

We wish Professor Mulheron luck of his protege, Hayes, and we wish the latter luck ot his self-elected advocate. Our solid conviction is that Dr. Maclean is in a position to bid Hayes, Mulheron and all their associates and accomplices absolute defiance.

What does the profession think of this Mulheron, who leagues himself with a "confidence" man in an attack upon a fellow practitioner. In his attack upon the University, Mulheron has two strong allies. One of them is reported by his neighbors as having assaulted a female relative because she refused to give him money; while the other has been pronounced a "confidence" man by the Supreme Court of Illinois.

CORRESPONDENCE.

TO THE PROFESSION.

My attention has been called to a circular to the profession lately disseminated, and purporting to come from Dr. D. A. Joy of Marshall. This may be another "*forged*" letter and he may not be responsible for any of the statements it contains. Whether he is or not I wish to say that *I am not mistaken as to the object for which he pretended to want of me a certificate concerning his belt.* It is true, I did say that the picture of a nude woman with what I think is called a menstrue pad on her back and represented as writing Dr. D. A. Joy's name on a placard was the worst thing in the pamphlet. From what I have seen of it I am still of the same opinion. For while equally quackish with the rest, it is more indecent. I was speaking then of the effect of the pamphlet on himself, and did not make the remark in the sense in which he represents it. I believed at that time that he had been duped, and treated him as kindly as possible, believing he had been deceived as to the character of the man who was making his belt. I continued to treat him thus charitably until investigations made by Dr. Palmer as a member of the committee appointed by the faculty for the purpose, convinced both him and me that Dr. Joy had not been deceived as to the character of Mr. Wagner; that he was insincere in his professions and not entitled to further confidence. With this impression, so far as Dr. Palmer and myself are concerned, we called upon the Regents to investigate the matter. Dr. Joy will have an opportunity to exonerate himself before their committee if he can. Whatever they may find in the case, I know if he is responsible for all of the letter lately issued to the profession, dated Ann Arbor, October 14, 1881, that he has falsely represented his relations to me in the matter. Whatever the Regents may find concerning him, I have learned upon reliable authority that Wagner & Co. were well known in Marshall, that they had previously been engaged in manufacturing an electrical belt and had advertised it in a similar manner, and that Dr. Joy could not be, and was not ignorant of these facts when he obtained the certificates of the members of the faculty. G. E. FROTHINGHAM.

[I.] HEALTH IN MICHIGAN.

Reports to the State Board of Health, Lansing, for the week ending October 1, 1881, by fifty observers of diseases in different parts of the State, show causes of sickness as follows:

NUMBER.	DISEASES, IN ORDER OF GREATEST AREA OF PREVALENCE.	NUMBER AND PER CENT. OF OBSERVERS BY WHOM EACH DISEASE WAS REPORTED.	
		Number.	Per Cent.
1	Intermittent fever (ague)	46	92
2	Diarrhœa	45	90
3	Consumption, of lungs	35	70
4	Remittent fever	32	64
4	Typho-malarial fever	32	64
5	Dysentery	30	60
6	Rheumatism	28	56
7	Neuralgia	27	54
8	Bronchitis	24	48
9	Cholera morbus	23	46
10	Cholera infantum	22	44
11	Typhoid fever (enteric)	20	40
12	Diphtheria	16	32
13	Tonsilitis	15	30
14	Influenza	10	20
15	Pneumonia	9	18
16	Whooping-cough	8	16
17	Erysipelas	7	14
18	Scarlatina	5	10
18	Cerebro-spinal meningitis	5	10
19	Bowels, inflammation of	4	8
19	Brains, inflammation of	4	8
20	Croup, membranous	3	6
20	Measles	3	6
21	Puerperal fever	2	4
21	Pharyngitis	2	4
22	Paralysis, diphtheritic	1	2

It will be seen that the most widely distributed disease was one not often fatal, namely, intermittent fever (ague), ninety-two per cent. of all the observers having reported that disease under their observation. Ninety per cent. of the observers reported diarrhœa, which thus appears to be unusually prevalent for the season of the year. About one-third (thirty-two per cent.) of all the observers report diphtheria, ten per cent. report scarlet fever, and the same proportion, cerebro-spinal meningitis. No small-pox was reported from any part of the State. The five places from which scarlet fever were reported in this manner were: Detroit, East Saginaw, Saginaw City, Muskegon and Pontiac. If this disease is present at any other place in Michigan, the Secretary of the State Board would be glad to be informed.

Diphtheria is known to be present in other places than the sixteen from which it was reported on the weekly report plan. Pamphlet documents on the restriction of diphtheria are being sent from the office of the State Board of Health to such places as fast as they are reported. It frequently happens, however, that diphtheria occurs in localities that have not placed themselves in communication with the State Board as the law requires, by reporting the name and address of their health officer and by reporting outbreaks of diseases dangerous to the public health, as required by the State Board, under the law.

In order to make these weekly bulletins as complete as possible, local health authorities should make their reports to the State Board promptly, and regular observers are respectfully requested to send in reports as soon as possible after the close of each week.

HENRY B. BAKER,
Secretary State Board of Health.

A PIECE OF GLASS REMOVED FROM THE FOOT AFTER FOURTEEN YEARS.

EDITOR OF THE PHYSICIAN AND SURGEON: I met with a little incident to-day which surprised me more than anything has for a long time. I was called to see a lady, Mrs. B., aged twenty-eight, who has been suffering for several days with an abscess in the sole of her foot. Upon cutting through the skin my lancet point came in contact with a hard, gritty substance. Using a probe I soon made out a foreign body, and gently seizing it with my pincers I had no trouble in extracting it, when it proved to be a triangular piece of glass, measuring one-half inch in length and just one-quarter inch in width at the base. The incomprehensible part of the story is, that it had been imbedded among the palmar tissues of her foot for over fourteen years, causing little or no inconvenience until recently, when some extraordinary interference started it on its journey, *point foremost*, towards daylight. The cicatrix where it entered is about one inch anterior to where it came out, and, as she says, there was a square piece, about one-half inch long removed at the time it entered, I conclude it has not moved from its locality of fourteen years ago, excepting to turn part way around and present the end to the surface, which was first to enter it. If this sharp, angular piece of glass could become encysted in a part so constantly exposed to pressure and motion, we surely need not be surprised at any departure from prescribed surgical laws. Yours truly, G. W. FUREY, M. D.

SUNBURY, PENNSYLVANIA, October 27, 1881.

AN INQUIRY.

EDITOR OF THE PHYSICIAN AND SURGEON: Some time ago I was called, in consultation, to see a family in which four children had been taken with scarlatina. Two had already died, and the other two were in a dangerous condition. The glands of the neck enlarged and suppurated, and the chest of one exhibited signs of hydrothorax. Investigation revealed a strong syphilitic taint in the family, and the query in my mind is as to how far the scarlatinous poison was aggravated by this cause. Other cases in the neighborhood were of the ordinary type, but these children all had the disease in a severe form which proved fatal in every instance. Perhaps some of your many readers from their experience in similar cases can throw light upon this inquiry. Very truly yours,

W. H. SMITH, M. D.

SAINT CLAIR, MICHIGAN, October 6, 1881.

MICHIGAN STATE BOARD OF HEALTH.

Reported for THE PHYSICIAN AND SURGEON.

The regular quarterly meeting of this Board was held October 11, 1881. An interesting feature was a report by the Secretary relative to work of other State Boards of Health. The Secretary of the Michigan Board desires to continue to receive information from other Boards by which these reports may be made quarterly.

A report relative to work of local boards of health showed increased activity on the part of local health authorities in the way of isolating those infected with communicable diseases and enforcing the law requiring from householders and physicians notices of such diseases. In one city a physician had been fined $100 for not reporting cases of diphtheria.

The revised document on the restriction and prevention of scarlet fever, was adopted, and ordered published in English, Dutch, and German. The consideration of this document involved a discussion of the question of recommending health officers to verify diagnosis of reported cases of diseases dangerous to the public health.

A circular giving general rules for the prevention of diphtheria, scarlet fever, and small-pox was adopted. Forms were adopted for annual reports by health officers and clerks of local boards of health, and by regular correspondents of the Board.

Dr. Avery, of Greenville, was requested to visit the overflowed district along the Maple River, in Gratiot county, and report to the Board.

Dr. Lyster, of Detroit, read a paper on "Syphilis in its Relations to the Public Health." It dealt with the facts of the frequent communication of the contagium of syphilis, by direct and by indirect means, to innocent persons; also with the serious effects on individuals, and on the offspring of marriages where one of the parents is thus blighted. He believed much might be done toward preventing this loathsome disease by wise legislation which shall restrict syphilis, and especially by collecting and disseminating among young men and other people, facts relating to the nature and dangers of this disease.

Dr. Kellogg read a paper on the "Relations of Preventable Sickness to Taxation," showing by the reports of the board of correction and charities, the abstracts of reports of county superintendents of the poor, the abstracts of statistical information rleating to the insane and the deaf, dumb, and blind, and the vital statistics reports, that more than three thousand persons in Michigan are annually dependent on the State for support to a greater or less extent in consequence of diseases preventable by the adoption of proper sanitary measures. The cost to the people of the State for the support of these persons is over forty thousand annually, a portion of which is paid by every taxpayer. This is but a small part of the actual loss to the State. The number of deaths from preventable sickness in 1880, (*estimated* from returns by supervisors and assessors) was four thousand five hundred and eighty-five. Placing the value to the State of each human being at the low estimate of one thousand, the aggregate loss by deaths from preventable sickness is over four million five hundred thousand dollars. To this must be added a further loss from sickness that did not terminate fatally. Statistics of the benefit societies of England show that for every person who dies two persons (on the average) are sick throughout the year. This indicates a total annual loss of time from preventable illness on the part of more than nine thousand persons, to which should be added the expenses of living etc., certainly more than one million dollars. This gives about five million six hundred and sixty-six thousand dollars as the total loss to this State from diseases generally conceded to be preventable. These figures are regarded as much too small, because of the few diseases included in this estimate as preventable (though it is generally conceded by sanitarians that at least nine-tenths of all ailments may readily be prevented), and because only sickness and deaths directly traceable to preventable causes have been included, while a large amount of sickness and many deaths are indirectly due to these causes. It is probable that preventable sickness might justly be charged with an expense to the State of not less than ten million dollars. Estimating the loss in other states in the same ratio to the population, the aggregate loss to the whole United States is not less than three hundred million dollars annually, an amount which should pay the national debt in six years.

Mr. Parker, of Flint, presented a report of the Public Health Section of the American Social Science Association, at Saratoga.

The committee on sanitary survey of the State was requested to prepare schedules for the sanitary survey of cities, villages, and townships.

Mr. Parker, reported a proposed bill authorizing all boards of education to exclude from school, persons infected with diphtheria, scarlet fever, or small-pox, or living at houses where any person is infected with one of these diseases.

The Secretary was directed to prepare and issue a weekly bulletin of sickness in Michigan for such papers and medical journals as will publish it.

Dr. Baker was authorized to procure the services of an architect in the preparation of a circular on hospitals for communicable diseases.

Dr. Kellogg reported on the subject of criminal abortion. He and Dr. Hazlewood were requested to prepare a circular designed to collect facts on this subject.

TRANSLATIONS.

Translations from Russian Journals for THE PHYSICIAN AND SURGEON.
BY RALPH D'ARY, M. D., ROMEO, MICHIGAN.

AMPUTATION OF TARSUS BY MODIFICATION OF CHOPART'S METHOD.

Amputation by Chopart's method leaves a stump with two bones—the astragalus and the calcaneus—all the rest of the foot is amputated. Consequently the points of attachment of the flexors of the tarsus are removed, and the extensor muscles being freed from their antagonists, forcibly draw the heel backwards and upwards. This action is favored by a purely mechanical momentum, namely: that the posterior end of the lever (the foot) is now longer than the anterior. The patient therefore necessarily rests his weight, in standing or walking, on the lower angle of the os calcis, or even on its anterior surface. This position shortens the extremity and makes his gait difficult and awkward. It would seem, if the flexor tendons become united with the stump, that the retraction of the tendo Achillis should to some extent be neutralized, and the os calcis remain in its normal position. In reality, however, it is not so. So constantly does the stump assume the retroverted position, that Malgaigne had made it a practice, after performing Chopart's operation, to saw off the anterior external angle of the os calcis, with the object of improving the patient's walk.

This unsatisfactory result of Chopart's operation has long since attracted the attention of surgeons, and various modifications of his method have been proposed. Jobert, for instance, did not remove either the scaphoid or the cuboid. Malgaigne spared only the scaphoid. I have recently removed a tarsus by a modification of Chopart's method which closely approximates the modifications of Jobert and Malgaigne, and which has given such a brilliant result, that I think it worth while to record it.

The patient was a healthy man, aged thirty-five, who five or six years ago had had his foot crushed off, through the middle of the metatarsal bones, leaving the lower end hanging by the skin. He had it removed and left the wound to itself, but it had only partly cicatrized, and presented no probability of permanent closing. After careful consideration, Professor Bogdanofsky, in whose clinic the patient had presented himself, suggested to me to perform the operation as here described.

I made two lateral incisions, beginning at a point midway between Chopart's and Lisfranc's points, and made two flaps, a dorsal and a plantar one. The metatarsal and cuboid bones were extirpated, and the now projecting part of the cuboid was sawed off in a plane with the convexity of the anterior surface of the scaphoid. Bleeding was insignificant: Three silk ligatures were needed. The wound was drained through its whole extent and closed with metallic sutures. A common bandage with a two per cent solution of carbolic acid was applied. This was done on June 5, 1880. The next day the stump was found to have kept its normal position.

A week later the patient could actively flex and extend the stump, without feeling much pain.

On July 9, he could step on the stump without pain. It was freely flexible and extensible, both actively and passively.

On July 15, he left the clinic. Six months later I presented the patient to Professor B. The whole of the stump, except its anterior border, was covered with moveable, normal integument, which could easily be taken up in a fold.

The anterior dorsal border presented a firm, white, immovable cicatrix, about one and one-half inches in width. The internal aspect of the stump was slightly elevated. When standing the patient rested on the os calcis and cuboid. He could step, flex and extend the stump and turn it inward quite freely and painlessly; also to some extent turn it outward. He wore a common boot, filling its anterior part with cotton batting and experienced no difficulty in walking, although there was a slight halt in his gait. According to his own expression he had such complete control over the stump that he "might even dance."

The only difficulty we can see in this operation is the shortness of the flaps obtainable, which in our case had prevented healing by first intention, but the final result amply recompensed us for this temporary disadvantage.

Let us consider the advantages of this operation.

The functions of the stump depend on two data, muscular contraction and mechanical leverage. We have already mentioned the unfavorable result in the latter, after Chopart's original amputation. Leaving out of consideration the effects of muscular contraction on the normal position of the astragalus and calcaneus, we see that the astragalus, owing to its position with regard to the calcaneus, must be borne downward by the weight of the body, carrying the tibia with it. For the same reason also the anterior part of the calcaneus assumes a position more horizontal than in the normal foot, and under the influence of the retraction of the tendo Achillis, it points diagonally downward. Under these circumstances the astragalus from the horizontal, changes to an almost vertical position, and finally the patient rests both bones on the ground, but especially the head of the astragalus and the lower angle of the calcaneus. Linhart ascribes this result exclusively to the weight of the body; others, in addition, recognize in it the effect of the retraction of the tendo Achillis. We shall show that retroversion of the heel may result from muscular contraction alone, without any influence of the weight of the body.

By retaining the scaphoid and cuboid (even though only its posterior half) we lengthen the anterior arm of the lever of the stump, so that the patient rests his weight on both arms of the lever, and the displacement of the astragalus and calcaneus becomes an impossibility, and the patient can walk with comfort. Though we may admit that retroversion of the heel may be moderated to some extent, by muscular contraction of the flexors of the foot, yet is this influence neither sufficient nor to be relied on, even when the flexor tendons form perfect adhesions with the stump. Simultaneously with the above operation another one was performed in the same clinic, after Chopart's original method. The patient could freely flex and extend the stump, nevertheless the heel was drawn up, which I consider a satisfactory proof that the flexors have not sufficient power to antagonize the tendo Achillis. And yet the patient at that time had not begun to step on his foot. What can we expect, therefore, when the flexors will have to sustain half the weight of the body, in addition to the tension of the tendo Achillis? Or, what would be the result in a case where the flexor tendons should not properly adhere to the stump?

In those cases it has been recommended to make a tenotomy, in order to dispense with the action of the gastrocnemius, the soleus, and plantaris. But when the tendo Achillis is cut, the stump loses its last means of active motion and becomes a useless appendage of the tibia, only fit to lengthen the limb, by being placed in some artificial apparatus.

But when the operation is performed as above related, part of the attachment of the tibialis posticus is retained, and this muscle, whilst raising the inner side of the stump, also helps to prevent the retraction of the heel. Neither must we overlook the fact that sometimes the peroneus brevis is attached to the cuboid, and Henle states that an additional muscle, the peroneus quartus of Otto, occurs not infrequently, and is attached either to the calcaneus or the tuberosity of the cuboid (Wood, 1868). All this speaks in favor of the proposed modification of Chopart's method.

It is probable, however, that in the case of our patient the flexor tendons must have become enclosed by inflammatory adhesion in the cicatrices which existed prior to the operation, and which were included in the dorsal flap. Otherwise it would be difficult to explain the perfectly normal position, spontaneously retained by the stump, and its active flexion and extension by the patient on the ninth day after the operation.

The raising of the inner aspect of the stump, of course, is due to the stronger action of the tibialis posticus, it being attached immediately to the bones, whilst the peronei were attached to the cicatrix.—Beltsof. Translated in abstract from the *Weekly Clinical Gazette*, Saint Petersburgh.

A SNAKE STORY.

Last spring I was called to see a boy, aged eighteen, bitten by a snake. I found him lying on the bed, with a bandage above his right knee, and all the body, but especially the face, much swelled. He was bathed in a cold perspiration, throwing himself about as if semi-delirious, moaning, and occasionally complaining of severe pain in the foot (where he had been bitten), of oppression, a strange sensation all over the body, vertigo, and considerable thirst. He cried out loudly from time to time; his face expressed anxiety and suffering, and whenever he tried to sit up he fainted. His breathing was superficial, 25 per minute; the pulse was hardly perceptible, 65. The pupils were dilated and responded feebly to the light. He had singultus. The ends of his fingers could not be approximated, because of the edema; the nails were purple.

Not having any remedies at hand, and having read sometime and somewhere about the effect of lemon-juice in snake-bite I made a few incisions in the skin, in the vicinity of the bite, then I took half a lemon and squeezed and rubbed the juice into the incisions. I also gave the patient the juice of one whole lemon, diluted, to drink, at one dose, and ordered cold compresses to his head and little pieces of ice to be allowed to melt in his mouth. Immediately after drinking the lemonade, he vomited up a greenish-yellow fluid in abundant quantity. Three quarters of an hour later I gave him the juice of the half of another lemon, and an hour later the patient became quieter and fell into a deep sleep. The next day he complained only of weakness and headache; the œdema had completely disappeared, and respiration, pulse and temperature were normal. (I did not take his temperature during the stage of poisoning). On the third day he was able to walk, with the help of others, but complained of vertigo. On the fifth day he was able to leave the house unaided. I could not find out what kind of snake had bitten him.—Dr. Yasvitsky in *Med. Obozr.*

[The above description clearly shows that the snake poison had exerted its usual depressing influence on the nerve centers, and consequent interference with circulation and respiration, and that recovery was probably spontaneous, after elimination or chemical disintegration of the poison. The lemon juice could have had but a very insignificant effect, if any at all, in hastening recovery. The experiments conducted under the auspices of the government of East India, as well as those made in this country, some time ago, when government had offered a reward for an antidote to the rattlesnake poison, have conclusively shown the utter uselessness of similar remedies, or at any rate have demonstrated the fact, that though the poison and the supposed antidote may be administered at the same moment, yet the poison attacks the nerve centers with almost lightning-like rapidity, and exerts its destructive influence long before the antidote is assimilated or able to produce its physiological effects.

Whilst camping out in Finland, a friend of mine was bitten by a black snake and showed exactly the symptoms above described. No remedies, not even stimulants, were at hand. I therefore gathered some juniper berries, made a tea, and began to administer it, *after partial improvement had commenced.* I did not expect the tea to remove the poison, but intended it should increase the elimination of the morbid products necessarily resulting from such violent disturbance of the functions, and so hasten recovery.

Whilst a boy, and berrying in the swamp, I saw a peasant boy of about eleven years of age, trying to catch a black snake behind the head. He succeeded, but whilst carrying it, the snake freed its neck, turned its head and bit him between the thumb and finger. He staggered and fell. I managed to drag him into his little hand-cart and wheeled him home. The "wise woman" of the village was at once sent for, and dispatched all the assembled village boys into the swamp, to catch young frogs. They soon returned with an abundant supply, and the woman kept holding those frogs one by one to the wound, changing them every few minutes. So far as I remember, the boy presented symptoms similar to those above described and recovered in a similar manner. . The œdema of the body was frightful.

These two instances prove—not that the juniper tea or contact with the frogs are antidotes to the snake poison, but that the latter has a self-limited effect; and that recovery depends rather on the stamina of the patient, or the quantity and quality of the poison, than on any antidote. Stimulants no doubt, would be most useful.]—TRANSLATOR'S NOTE.

"THE CUP THAT CHEERS."

Dr. Luton writes in the *Bulletin Général de Thérapeut.*, 1881, Number VI (quoted by *Med. Obozr.*): "By chance I prepared a mixture whose physiological effects are remarkably like those of protoxide of nitrogen (laughing gas). It is a combination of phosphate of soda with tincture secalis cornuti.

"In ward L. of the Reim's Hospital, a woman, aged sixty-two, was taking tincture of ergot for sub-acute arthritis of the right knee. In order to increase the effect of the medicine, I added to it some sodic phosphate. In a quarter tumblerful of sugared water the patient was given a teaspoonful of tincture of ergot and a tablespoonful of a ten per cent solution of phosphate of soda. In three-quarters of an hour, without any apparent cause, the patient had an attack of hilarity and laughter, which lasted about half an hour, and returned several times. She appeared as if intoxicated and her pleasurable feelings remained for some length of time after the stage of excitment proper. She was given the same mixture several times and always with the same results.

"Another patient, suffering from a chronic affection, on noticing the effect of the medicine on the first mentioned patient, wished to have it tried on herself. She was given the same dose, and in a quarter of an hour, she had an attack of pleasurable excitement and laughter, more intense and more prolonged than the other woman. Manifold repetitions of the experiment produced the same results.

"A third patient, a single female, aged seventy, with decided hypochondria, was given the same dose of the mixture, and in three-quarters of an hour, had an attack of immoderate laughter, merry talking and stamping of the feet. She said she felt very happy. Even on the second and third day, the recurrence of the symptoms was plainly noticeable, although she had not been given any more of the medicine.

"Another patient, a chlorotic, hysterical girl of nineteen, in three-quarters of an hour, experienced a pleasant warmth all over the body, with great cheerfulness and slight intoxication, like that which follows on generous wine; also attacks of laughter. She seemed to be in a most happy mood." The doctor continued his experiments and found that the mixture produced the same effect on healthy women, old men and children. On men it acts much less: the same dose produces in them only a flushing of the face. He did not give anyone a larger dose, but thinks the same effects could be induced in men.

How and why does this mixture act in this manner? This question the author does not answer yet. We know that ergot (apart from its characteristic convulsions) has a powerful influence on the brain and the nerve centers. In rainy years, when the rye in Russia contains sometimes over five per cent. of ergot, the bread made from rye not infrequently induces slight intoxication. Perhaps the phosphate of soda increases this effect on the brain. Perhaps from the mixture of the two drugs a new substance results, with an effect similar to hasheesh.

The author's formula for the mixture is as follows:

℞. Tinct. secalis cornuti...................... 5 | 0 (ʒj+gr. xvi.)
Solutionis phosphatis sodæ 10%...... 15 | 0 (f℥ss).

M. S. Drink all on an empty stomach, in a quarter tumblerful of sweetened water.

The author suggests that the mixture may be very useful in certain diseases, as: hypochondria, melancholia, nervous chills of the hysterical, the algid stages of fevers and cholera, since the remedy evidently increases the cutaneous circulation, as evidenced by the flushed face and pleasant feeling of warmth. He thinks it may further be beneficial in adynamic conditions; chlorotic amenorrhœa, etc. For therapeutic purposes the dose would of course have to be smaller.

BICARBONATE OF SODA IN BURNS OF EVERY DEGREE.

Dr. I. Troitsky has used bicarbonate of soda, exclusively, in twenty-five cases of burns and with the best results. Several of these cases were very severe, yet all recovered, and in a comparatively short time. In burns of the first degree he sprinkles the wound with the dry soda, or covers it with a compress saturated in its solution (one drachm to six ounces). In burns of the second and third degrees the sprinkling is unsatisfactory, as the soda, with the secretion of the wound, forms a crust which retains the pus; in these cases the compresses act much better. In burns of the second degree the compresses are not removed when they get dry, but the solution is simply poured over them. In burns of the third degree the compresses are removed, in order to cleanse them and the wound.

The doctor accounts for the beneficial action of the soda on three grounds: the bicarbonate of soda acts as an anæsthetic, an antiseptic, and a disinfectant.—*Vratch.*

Translations from French Journals for THE PHYSICIAN AND SURGEON.
BY R. A. PACKWOOD, LES ILES, BERMUDAS, WEST INDIES.

A CASE OF ADDISON'S DISEASE.

The patient, aged fifty, entered "à l'hopital de la Petié," on the 14th of May, under the care of Professor Lasègue.

He had suffered for fifteen days from a very profuse diarrhœa, had lost appetite, complained of malaise and general debility by which his occupations were interrupted and he forced to seek admission to the hospital.

He was a man of medium size, brown complexion, of robust appearance, though visibly emaciated, with down-cast and sad expression. Had slight pyrexia, pulse, 84; temperature of the skin not elevated; tongue somewhat white; the abdomen rather more distended than retracted, was the seat of a gurgling sound easily produced by pressure over the region of the descending colon; on the same level (at another point) a tympanitic sound was discovered which contrasted with the matité (dullness) over the remainder of the abdomen.

He stated that the diarrhœal discharges always had the same character, that he had ten very abundant liquid and yellowish stools in twenty-four hours, slight malaise but no violent colic before emaciating.

The liver and spleen were of normal size, and no physical sign of any grave abdominal affection. Urine was also normal.

The heart sounds were regular; had slight cough but did not complain of any pain in the lungs; expectoration was mucus, but not very abundant; attentive auscultation revealed only a variable respiration with sibilant expiration throughout the posterior part of both lungs; moreover in the right supraspinous fossa was observed a harsh and prolonged expiration and marked echo when he articulated. These signs were not accompanied by any adventitious sound, and notwithstanding their localization at the apex, they did not appear sufficiently significant to permit us to affirm the existence of an indurated pulmonary nucleus at the corresponding point.

Under these conditions it was very difficult to account for the nature of the intestinal troubles experienced by the patient, and especially for the so markedly enfeebled state in which he was found after a disease of so short duration, when we were led to examine more closely and to attach great importance to a *fact* which had been observed during the course of the examination: we refer to the *peculiar discoloration* of the *skin.*

In fact, the face and hands were of a tawny color, as if the patient had been exposed to all inclemencies and changes of weather, though he, as a rule, worked at tailoring. The bronze tint was not limited to the uncovered parts, but extended over the whole surface of the skin; it was more marked on the arms and legs, than on the hands and face, and still more so over the trunk than the limbs; it was at its maximum over the abdomen and internal surface of the thighs, particularly upon the scrotum and sheath of the penis, which was nearly black.

Upon the darkest parts, that is, the abdomen, thighs, in the folds of the groin, the axilla and bend of the knee, the tint of the skin was that of sepia brown; on the arms and legs, it was olive color, as in certain mixed races. Over the abdomen, around the waist, were observed some clear spots surrounded by a dark circle contrasting with the discolored center. These patches seemed to correspond to traces of an old eruption of which, however, the patient had no recollection.

The mucous membranes were pale, as in the anæmic; but the buccal mucous was rosy throughout except opposite the large superior left molars, where there was an irregularly circumscribed patch, about the size of a franc piece, which presented a brown fuliginous appearance.

The hair and whiskers were of a dull black, and the iris was dark-brown color. Interrogating him on the origin of this abnormal discoloration, he said that he had noticed his skin becoming more dark for two months. Since that time, and even before, his strength had gradually diminished, and he had suffered several attacks, lasting one or two days, from a sensation of extremely painful epigastric heaviness; so that it was necessary to refer the beginning of the disease to that period.

The patient, then, presented the essential symptoms of "Addison's disease," that is to say, very marked general debility without any organic lesion sufficient to explain the diminution of strength, the mild gastro-intestinal troubles, and the bronzed color of the skin developed in so short a time. No other hypothesis could explain the observed symptoms, hence we stopped with this diagnosis.

The antecedent history of the patient was very complicated. He had had during his military service, in 1864, a severe bronchitis with fever, aphasia and very persistent cough, for which he had been sent for a season to Amélié les Bains. In 1876 and 1877, having renewed cough, he again returned to the same place. In 1880 he entered à l'Hotel Dieu for a slight attack of erysipelas of the face, from which he recovered. As we have said his health began to decline gradually and without showing, at the beginning, any sign of the present condition.

The patient was submitted to a course of medication, consisting of glass of purgative mineral water each morning, and a potion with ten centigrams of the extract of opium evenings; the diarrhœa yielded rapidly and he became better, though he remained feeble. After a little while his cough returned, and he was taken almost daily with accesses of fever, lasting two or three hours and returning about 3 or 4 P. M.

These attacks were irregular in their course, though the three stages of *cold*, *heat* and *sweat* were always present. Was given sulphate of quinine at first in doses of .75 of gram, and later in doses of .50 of gram, this steadily modified the attacks which became very short and were limited to chills without heat or sweat. Appetite became better and the digestive functions almost normal, diarrhœa occurred from time to time.

At the beginning of April, this period of comparative ease was interrupted by an attack of angina, which continued fifteen days, had slight fever and difficulty in deglutition, redness of the tonsils, and columns of the pharynx. Strangely too, a whitish opaline spot was seen upon the middle of the palate, apparently formed by a somewhat thickened exudation, this spot increased little by little, preserving a regularly circular form, it finally became effaced and disappeared without causing any appreciable dequamation. At the end of April, the patient was again attacked with cough and diarrhœa, which confined him to his bed. He was sad and despondent, and felt extremely weak. The bronzed color had manifestly increased since his entrance; the abdomen, scrotum, penis, inguinal folds and inner side of the thighs were dark-brown, with black points at intervals. The white spots around the waist had become less distinct, the surface of the limbs was also darker, the brown spot on the internal surface of the cheek, on the contrary, was less marked.

Signs of pulmonary auscultation had not varied, the harsh and prolonged expiration continued, also bronchophony in the right supra-spinous fossa.

The patient weighed sixty-six kilogrammes in January, up to this time had lost fourteen kilogrammes (in four months). During the month of May and beginning of June, he improved somewhat, appetite remained, strength increased and the pigmentation did not progress. Patient coughed from time to time, but did not expectorate much. Suspicious signs of induration remained at the apex of the right lung. At the commencement of June, moist râles appeared in the supra-spinous fossa, cough increased, expectoration abundant and yellowish and it was evident that a softened pulmonary focus existed at this point, at the same time diarrhœa reappeared and his strength rapidly diminished.

During the month (June), there was persistent diarrhœa, with occasional intermittence, cough provoked vomiting almost always after meals. The moist râles and bronchophony which had been limited to the right supra-spinous fossa, now extended over half the posterior portion of the lung. Anteriorly, on both sides, sibilant and moist râles were desiminated.

Three weeks later, patient was extremely weak and emaciated, was confined to bed, changed position with difficulty, expression of countenance sad and dejected, discoloration had greatly increased especially upon the face.

Towards the 1st of July, diarrhœa became incessant and uncontrolable, so that the discharges passed unperceived; auscultation was extremely difficult on account of the great prostration. The brown color grew more uniform, approaching the color of tobacco. The articular fold, abdomen, and especially the scrotum and penis were much darker than the remainder of the body. Patient died July 14.

The autopsy, unfortunately was made during very warm weather, and cadaveric decomposition had so advanced, that the results were unavoidably incomplete.

Both lungs were infiltrated with confluent tubercles; the left lung in particular was invaded by a process of caseous degeneration, which had produced a degree of softening at its apex and anterior border, it appeared altogether like a case of rapid phthisis.

The supra-renal capsules, which beside the lungs were the only organs examined, in consequence of putrefaction, were entirely changed in structure, but it was difficult to characterize the lesions. It appeared like a circumscribed degeneration, in the middle of which a compact formation of fibrous tissue could be distinguished. By the microscope the alteration was recognized as a tuberculous transformation identical with that described in the memoir on "Local Tuberculosis," by M. Brissaud, *Archives*, December, 1880. This merits being reported on account of the striking resemblance to the first case observed by Addison. In neither case was pulmonary phthisis manifested until after pigmentation of the skin—not until the patients had become cachetic. The conclusion which may be drawn from these cases seems to support the hypothesis of a cachexia, of which the cause or anatomical manifestation is essentially localized to the supra renal capsules.

Though this opinion has long been contradicted, and though, even, at the present time certain authors combat the idea with persistence, it is rather well established by a large majority of cases, even where it occurs as a coincident, the coincidence representing almost the general rule.

Among several cases, we call attention to two which were remarkable from their exclusive localization to the supra-renal capsules.

We have noticed that related by M. Brissaud in his memoir on "Local tuberculosis," which occurred as a bronzed disease, being evolved in a few months, in a woman of fifty, at the autopsy of whom the only lesions observed consisted in tubercles of the capsules, and two small foci of the uterus, evidently older than the capsular, and the only traces of tubercularization.

Second case, quite recently reported in *Les Archives de Physiologie*, by M. Renaut. This patient had only the capsular lesions. Thus these two observations deny the law of Louis, and confirm the possibility of a special tuberculous cachexy without phthisis, which opinion is favored by Laënnec.

TREPHINING THE OS ILIAC FOR ABSCESS IN ITS INTERNAL FOSSA.

The patient was a man, twenty-four years of age, suffering, since the commencement of January, 1880, with pains in the region of the left kidney.

On his entrance at the hospital on May 5, 1880, the following conditions were noticed: The patient was very emaciated; pain in the kidneys; almost absolutely without power to move, when in the horizontal position; the left leg was abducted, flexed and rotated outward, pain on pressure on a level with the dorsal spinous processes; no protuberance.

There was felt a fluctuating tumor in the left iliac fossa, extending above the umbilicus, below the *arch of Fallopius* (?) and passing the median line by three centimeters; a dull crackling sound was heard at the top on the right.

On May 14 the abscess was opened below the arch of Fallopius (?) and there flowed away about one and one-half liters of pus. The walls of the cavity could not be reached by passing in a sound. The cavity was injected with a solution of salicylic acid and dressed in Lister's antiseptic method, the dressing being renewed every sixth day.

At the end of four weeks eschars appeared on the sacrum and also on the anterior superior spines of the ilium.

Pus did not discharge very freely and it was thought best to make a counter opening.

Introducing a metallic sound, thirty centimeters long, into the cavity in different directions, penetrated it entirely and freely. There was no osseous denudation. The end of the sound did not cause the integument in the lumbar region to protrude at any point.

The ilium was trephined on a level with its posterior superior third, six centimeters below the crest.

Immediately that the trephined disk was raised, the pus flowed away by an orifice one-half centimeter in diameter into which was inserted a drainage tube eight centimeters long.

His temperature on the evening of the operation was 37.3°; the following evenings it was 38.4°, 38.1°, the morning temperature did not exceed 37.5°.

Pus flowed freely; his strength increased; appetite was excellent; he grew stout; he was entirely without fever, presenting only a slight elevation of temperature in the evening of the day after dressing. Certainly the eschar on the sacrum tended to increase the fever, moreover it increased in size.

About, or at the commencement of July, it was noticed that the discharge of pus became less. We introduced a drain, not without difficulty, from anterior to posterior part, traversing the entire cavity, which was made to pass out by a new incision which was made on a level with the arch of Fallopius (?). Lister's dressing was abandoned, but the cavity was injected daily with salicylic acid solution.

Pus flowed in abundance by the posterior orifice, nothing by anterior. The general condition of the patient had ameliorated; suppuration diminished. Unfortunately, however, the eschars increased.

After August 7, the disease seemed to assume some new form and the patient was seized with diarrhœa.

Four days, only, before death the pus became fetid. He died on September 25.

Postmortem examination showed: Tuberculous lesions of both lungs; at the inferior part of the superior right lobe was a large cheesy-looking cavity.

The large purulent cavity which the patient suffered from at the first was reduced to a mere canal about the diameter of a finger, pointing upward and inward and terminating on a level with the ninth dorsal vertebra, this canal gave rise to several little prolongations which were pointed toward the ninth, tenth and eleventh dorsal vertebræ. From this canal two others originated, one a half centimeter large, opening at the trephined orifice, the other communicated with the second opening made in the inguinal region and extended as far as the coxo-femoral, or ilio femoral, articulation. The ninth, tenth and eleventh vertebræ (dorsal) presented their normal condition. The periosteum was separated by the pus and the osseous surface altered in front of and as far as the level of the costo-vertebral articulation. There were also caseous masses as thick as the eleventh vertebra. No pus was found accumulated in any part.

The operation of trephining was clearly indicated in this case and a counter opening was necessary; there was no point in the soft parts where the incision could have been made by preference.

The operation was made with the greatest facility and with very feeble reaction upon the system. In fact the object of the operation was almost attained; there were only a few pus burrows formed, and even the large cavity which first existed was reduced to a few straight fistulous canals.

Trephining the iliac is therefore a perfectly justifiable operation in certain cases of abscess of the internal fossa.

"PHLEBITIC RHEUMATISM."

Phlebitic rheumatism is a rare affection, the existence of which, demonstrated clinically, fails thus far to be proven anatomically.

It occurs in the course of "nonarticular, polyarticular, acute or blennorrhagic rheumatism," attacking the superior members by preference.

It is ushered in by general symptoms, and characterized from the first by inflammatory phenomena localized to one or more veins, and later by œdema of the affected member.

It is never followed by embolism of the pulmonary artery, and its benignity is a strong argument in favor of its rheumatic nature.

There is a gouty phlebitis, described by English authors, but like rheumatic phlebitis, it fails to be verified anatomically.

This gouty phlebitis attacks the inferior members by preference, is often followed by embolism of the pulmonary artery and so produces a fatal termination.

Patient.—T., aged twenty-six, entered á "l'Hotel-Dieu" September 21, 1880. This woman was of good constitution, had never suffered from rheumatism nor any serious disease. On September 11, ten days prior to entering the hospital, and without any appreciable cause, she experienced very sharp pains in the right shoulder and articulations of the left hand—these soon disappeared from the shoulder. The pains of the hand were localized to the metacarpo-phalangeal articulations were very severe, much increased by the least movement, and were accompanied by tumefaction around the joints. She had already taken the salicylate of soda which diminished the pain and swelling.

On her entrance (September 21) the following condition was observed: Patient was well formed, no emaciation, but rather pale, strength well preserved, appetite good and no elevation of temperature. All the articulations were intact except those mentioned, (the left) wrist and elbow.

There was tumefaction and pain at the fourth metacarpo-phalangeal articulation, with redness of the integument extending to the adjacent parts.

The wrist was somewhat swollen and painful, also the elbow, but its movement free.

On auscultation over the heart we distinguished a presystolic rattling sound, no functional disturbance in the circulation.

By reason of the localization and slight intensity of the articular phenomena, we could have suspected blennorrhagic rheumatism, but there was no specific vaginal nor urethral discharge.

Diagnosis.—"Subacute articular rheumatism."

Treatment.—Salicylate of soda four grammes.

September 23: The pain reappeared in the left shoulder and elbow; patient could not use the member, as each movement produced an exacerbation of pain. Morning temperature 38°, evening 38.5°.

September 24: Though the salicylate of soda was being administered, patient continued to complain of the violent pains. Articular swelling was not very great, but she suffered intensely when the limb was moved. Nevertheless the body was exposed and the following observed: On the internal face of the left arm a bright redness passing from the axilla to the bend of the elbow fading off on either side of the arm. This was also tumefied and its base œdematous, the adjacent skin pale white. Several tense and extremely painful cords were felt in the axilla and along the course of the veins, giving rather a pasty than indurated sensation to the touch. There was no œdema at the elbow, forearm nor hand. The articular trouble remained stationary at the hand and wrist.

Diagnosis was easy, following the course of the inflamed part, we decided on "phlebitis of the basilic vein."

Treatment.—(1) Immobility of the member, the forearm having been well flexed on the arm, and placed in a sling. (2) By cataplasms.

September 25: Swelling much diminished, pain not so sharp (rest had greatly assuaged it). She continued to repress movement of the member.

September 26: The cord more hard and tense, and throughout the length of the vein a distinct induration. An œdematous condition of the internal part of elbow, integument pale, subjacent tissues swollen presenting a sort of ballotment—the œdema was indolent on pressure and not easily pitted—it extended over the superior two-thirds of the forearm. Several dilated superficial venules were noticed.

September 27: Same condition, but the articular phenomena had disappeared.

Between September 26 and 30 the œdema diminished in the elbow and forearm, and the redness completely disappeared. The hard subcutaneous cord remained, but there was no longer any pain on pressure, though movement was somewhat painful hence she was advised to avoid motion.

October 10: Could clearly feel the tense cord both at the elbow and above.

October 23: There only existed the indurated cord over the course of the vein.

BOOK REVIEWS.

A PRACTICAL TREATISE ON HERNIA. By Joseph H. Warren, M. D., Member of American Medical Association; British Medical Association, etc. Second and revised Edition. Fully illustrated. Cloth; pages, 428. Boston: James R. Osgood & Co., 1882.

It has been but a few months since we called attention to, and spoke in praise of, the first edition of this work. Our opinion of its value expressed at that time has been confirmed by the speedy exhaustion of the first edition. It remains for us now to mention the changes in the revision. New chapters have been added on, "Causation of Hernia," "Recent operations for Hernia," "Artificial Anus and Wounds of the Intestines," "Hydrocele and Varicocele," "Observation on Hernia," and "Résumé and Clinical Reports." Many new illustrations appear and three handsome plates add much to the value and attractiveness of the volume. The index has been made more complete and the bibliography doubled.

Every physician is liable to meet at any moment with a case of hernia and, he will find the latest and best information on the subject in Dr. Warren's treatise.

SAINT NICHOLAS for November. Subscription price $3.00 a year. Single numbers 25 cents. The Century Company, Union Square, New York.

This number of Saint Nicholas contains a birthday greeting, the old gentleman having reached his ninth year, and right royally does he converse for one so old. Every boy and girl who has made the old gentleman's acquaintance in years gone by, will wish him many a return of his birthday.

THE PHYSICIAN'S VISITING LIST FOR 1882. Thirty-first year of the publication. Philadelphia: Lindsay & Blakiston. For sale by all booksellers and druggists.

This list is furnished in different sizes for from twenty-five to one hundred patients per week. It contains, besides the blanks, an almanac, Marshall Hall's ready method in asphyxia, a table of poisons and antidotes, the metric system, a posological table, and a table for calculating the period of utero-gestation. It is the most convenient visiting list known to us.

TEXT-BOOK OF MODERN MIDWIFERY. By Rodney Glisan, M. D., Emeritus, Professor of Obstetrics and Diseases of Women and Children in the Medical Department of Williamette University, and late President of the Oregon State Medical Society. Cloth; pages, 639, with 139 illustrations. Philadelphia: Presley, Blakiston, 1881. For sale by John Moore, Ann Arbor. Price $4.00.

This, as the work of a western man and one but little known outside of specialists in his department, deserves careful examination. The author thinks that there is a need for a new American work on midwifery as the recent editions of the volumes of Meigs, Hodge and Bedford have not kept pace with the progress of this branch of medicine, and the profession in America has been compelled to depend upon reprints of Playfair and Leishman and translations of Cazeaux and Schrœder.

Close examination convinces us that notwithstanding Professor Glisan's remote location from the great medical centers he has kept fully abreast of the times and has presented a work on midwifery of which the profession in America may justly be proud. The descriptions of methods are clear without being verbose, and the author's judgment upon practical questions seems to us to be without fault. We can most unreservedly recommend the volume to any one desiring a thorough knowledge of the operations of midwifery, as practiced by the most advanced American specialists.

THE CENTURY MAGAZINE (Scribner's Monthly) for November. Subscription price $4.00. Single numbers, 35 cents. The Century Company, Union Square, New York.

This number of The Century Magazine is replete with interesting stories, sketches and poems. Frederic W. H. Myers contributes an interesting sketch of George Eliot's life and work, which would be better appreciated we think, if he were more explicit and called things by their right names. The chief articles in this number are: My Escape from Slavery, by Frederick Douglass; A Diligence Journey in Mexico; Around Cape Ann; Costumes in the Greek Play at Harvard; The so-called Venus of Melos; In the Footsteps of Fortune, and Regnault, and a very readable sketch of Torumaso Salvini.

THE MOTHER'S GUIDE IN THE MANAGEMENT AND FEEDING OF INFANTS. By John M. Keating, M. D., Lecturer on the Diseases of Children at the University of Pennsylvania, etc., etc, Cloth; pages, 118. Philadelphia: Henry C. Lea's Son & Co., 1881. For sale by Sheehan & Co., Ann Arbor.

That thousands of children are annually killed by improper management and feeding, no physician of experience will deny. In the vast majority of these instances the injury is the result of ignorance on the part of the mother or nurse. The infant may have the greatest abundance of the richest food and still starve to death, because the food is not of the right kind. Babes, but a few weeks old, are stuffed with various starchy foods, which are to the child as nutritious as so much sand.

Dr. Keating's little volume gives explicit and accurate directions for the care of infants, and physicians will aid their own practice and save many a life by recommending it to mothers —both young mothers and older ones.

THE DISEASES OF CHILDREN: A PRACTICAL, SYSTEMATIC WORK FOR PRACTITIONERS AND STUDENTS. By William Henry Day, M. D., author of "Headaches; their Nature, Cause and Treatment." Member of the Royal College of Physicians and Surgeons; Physician to the Samaritan Hospital for Women and Children. Second Edition, rewritten and much enlarged. Cloth; pages, 752. Philadelphia: Presley Blakiston, 1881. For sale by John Moore, Ann Arbor.

This volume is an exceedingly valuable one. One feature alone will render it indispensible to every practitioner who has anything to do with the treatment of children. At the close of the volume there are given ninety-eight typical formulæ in which the author has studied especially how to render the medicines acceptable to the little ones. This alone, we say, will be worth to any physician more than the cost of the volume. We give two samples of these formulæ:

(I). SALINE APERIENT.

℞.	Magnesii sulphatis...........................	ʒj.
	Tincturæ rhei..................................	℥ss vel.
	Syrupi rhei......................................	℥ss.
	Syrupi zingiberis..............................	ʒij.
	Tincturæ cinnamomi.........................	ʒj.
	Aquam anethi ad..............................	℥ij.

M. S. One to two teaspoonsful to be taken at bed time and early in the morning. For children from six to twelve months old.

(15). ASTRINGENT.

℞.	Tincturæ opii..................................	♏vj.
	Tincturæ cardamomi co....................	ʒj.
	Syrupi...	ʒij.
	Decotum hæmatoxyli.........................	ad ℥jss.

M. S. A teaspoonful every four hours. For children a year old.

However, these formulæ are not the only things of value in the book. The entire work is systematic and exhaustive. Just what is needed by that much abused individual—the "busy practitioner"—who, at least, according to the experience of one of them, when he reads up on a disease, wants something exhaustive and not merely the scanty mention of a few fundamental facts, with which every freshman medical student should be already familiar.

Dr. Day is a thorough student and a man of large experience, and his work is a valuable contribution to our knowledge on the subject.

The typographical execution is excellent and in reading the work we have noticed but one error, Professor Law of Cornell University is in several places referred to as Professor Low.

LANDMARKS, MEDICAL AND SURGICAL. By Luther Holden, ex-president, member of council, and member of the Court of Examiners of the Royal college of Surgeons of England; consulting surgeon to Saint Bartholomew's and the Founding Hospitals. Assisted by James Shuter, M. A. Camb., F. R. C. S., assistant surgeon to the Royal Free Hospital; late demonstrator of physiology and late assistant demonstrator of anatomy, at Saint Bartholomew's Hospital. From the Third English Edition, with additions, by William W. Keen, M. D., professor of artistic anatomy in the Pennsylvania Academy of the Fine Arts; formerly lecturer on anatomy in the Philadelphia School of Anatomy, etc. Philadelphia: Henry C. Lea's Son & Co., 1881.

This little book is all that can be desired within its scope, and its contents will be found simply invaluable to the young surgeon or physician, since they bring before him such data as he requires at every examination of a patient. It is written in language so clear and concise, that one ought almost to learn it by heart. No student, once he has seen this little volume, will refrain from purchasing it. The fact that it has had three editions in England, since 1876, speaks for itself. It teaches diagnosis by external examination, ocular and palpable, of the body, with such anatomical and physiological facts as directly bear on the subject. It is eminently the student's and young practitioner's book.

A SYSTEM OF SURGERY, THEORETICAL AND PRACTICAL, IN TREATISES BY VARIOUS AUTHORS. Edited by T. Holmes, M. A., Surgeon and Lecturer on Surgery at Saint George's Hospital etc. First American from second English edition, thoroughly revised and much enlarged. By John H. Packard, A. M., M. D., Surgeon to the Episcopal and Saint Joseph's Hospitals, Philadelphia, assisted by a large corps of the most eminent American Surgeons. In three volumes, with many illustrations. Price per volume, in cloth, $5.00; in sheep, $6.00; half Russian, $7.00. Volume I, General Pathology, Morbid Processes, Injuries in general, Complications of Injuries, and Injuries of Regions. Philadelphia: Henry C. Lea's, Son & Co., 1881. Sold by subscription.

The old English edition of this work is well known and has been highly prized by the profession. The second English edition was thoroughly revised and all advancements in the science introduced by the authors. In the American edition, the text of the last English has been reproduced, unaltered and unabridged, with two exceptions, with comments and additions by the American authors placed in brackets. The two exceptions are, (1) the article on diseases of the skin and (2) that on affections of the absorbent system. These have been rewritten by competent writers. It will be seen from this that the edition now before us is in fact a new work when compared with the first English edition. The American editors have been selected with care, and the list embraces most of the prominent names connected with American surgery. In this volume we must call especial attention to the articles on inflammation and on syphilis, and the different articles on various injuries. That on inflammation written by Simon and Burdon-Sanderson and revised by Simes, is probably the best article upon the subject in any language. It embraces all the most recent researches of Cohnheim and others who have done so much to modify our views of the process. The article on syphilis written by Lee and revised by Professor Hyde of Chicago is complete, and its value has been greatly enhanced by the introduction of several lithographic plates. As to the articles upon tumors and cancers, it is sufficient to say that they were written by Sir James Paget and Mr. Moore and have been revised by Dr. Longstreth, a practical and original investigator in pathology. Sir James Paget has also contributed the papers upon ulcers and wounds. Mr. Holmes has contributed the articles upon burns and scalds and dislocations. Among the most prominent American authors, Professor Jewell has revised the articles on tetanus and hysteria; Professor Bartholow, on delirium tremens; Professor Hodgen, on injuries of the chest and of the abdomen; Dr. Packard, on fractions, dislocations and injuries of the pelvis; Professor Ashhurst, on animal poisons, and Professor Roberts on collapse and scrofula.

The work will be the most complete and satisfactory system of surgery yet presented to the profession, and, as a companion to Reynolds system of medicine published in the same form, will meet with a great demand.

THE PRACTICE OF MEDICINE AND SURGERY, APPLIED TO THE DISEASES AND ACCIDENTS OF WOMEN. By W. H. Byford, A. M., M. D., Professor of Gynæcology in Rush Medical College, and of Obstetrics in the Women's Medical College, etc. Third edition, thoroughly revised and rewritten. Cloth; pages, 682, with 164 illustrations. Philadelphia: Lindsay & Blakiston, 1881. For sale by Sheehan & Co., Ann Arbor. Price $4.00.

The profession in our country is especially fortunate in the possession of the best gynæcological authors known. Our great works, those of Thomas, Emmett and Byford, are unequaled in any language. With these three volumes in his library the general practitioner may feel quite comfortable as to the gynæcological literature at his command. Fortunately, also, these three great works differ from one another sufficiently, so that one is not a repetition of the other. Thomas and Byford excel in describing symptoms and giving grounds for diagnosis; while Emmett's work is especially valuable on account of its clearness in giving methods for performing gynæcological operations. No physician should content himself with the possession of any one of these works, but he should own all of them.

Professor Byford is especially fortunate in giving the significance of symptoms. One illustration will prove the correctness of this assertion. We quote the following upon the significance of leucorrhœa: "The discharge from the vagina, resulting from mere excitement of the vaginal crypts, is thin, glairy, and not very tenacious. It is ordinarily acid in reaction. There is no color and but little consistence to it. When a moderate excitement of the internal mucous membrane of the neck of the uterus produces a discharge of mucus, sufficient to appear at the orifice of the vagina the discharge is white, not unlike milk, and when examined closely, will be found to consist of minute coagula swimming in a little clear fluid. When the mucus flows from the mouth of the uterus it is thick and resembles very closely the albumen of an egg, and is alkaline in reaction. When it passes into the vaginal canal, it meets with the acidity of the vagina and is coagulated, and the whole changed from a colorless translucency to an opaque white. The reason that the coagula are small and so numerous may probably be found in the fact that the mucus arrives in the vagina in such small quantities; each coagulum represents a minute drop of mucus, changed in quality. As, however, the mucous membrane of the vagina furnishes only a small quantity of acidity, when this alkaline discharge from the cervix is copious it soon neutralizes the vaginal acid and passing through this cavity unchanged, appears at the external parts possessing its characteristic qualities. We then hear the patient complain of a tenacious, albuminous leucorrhœa; she will nearly always compare it to the white of an egg, but state that it is more tenacious. Unless the quantity is considerable, the mucus from the internal cervical membrane does not appear at the external orifice unchanged, but passes into this curdled condition. There is often a considerable quantity of this cream-like leucorrhœa in the whole length of the vagina, and hence it has been supposed by many that this is the vaginal mucus in its natural condition, and they have called it vaginal leucorrhœa."

"The abundance of this discharge is no criterion by which to judge of the amount of disease or its intensity, but it will scarcely remain colorless after the integrity of the mucous membrane is invaded. When the albuminous fluid appears at the orifice of the vagina, there is persistent cervical disease almost of a certainty."

"The thick, white, or egg-like albumen will be mixed, when there is ulceration in the cervix, to a greater or less extent, with pus, so that it will be stained yellow; if the quantity of ulceration is considerable and its surface is producing pus, the yellow will preponderate in the color, and sometimes the whole of the production becomes yellow. The yellow color may be in streaks through it, or intimately mixed with it so as to stain it uniformly; or the pus may be mixed with the white, creamy secretion found in the vagina. Pus may be mixed with any of the varieties of leucorrhœa, and impart to it its tint more or less completely."

Thus, all of the descriptions are very explicitly made, rendering the work especially valuable to the non-specialist.

A CHEMICAL ANALYSIS OF THE URINE, BASED IN PART ON CASSELMANN'S ANALYSE DES HARNS. By Edgar F. Smith, Ph. D., Asa Packer, Professor of Chemistry in Muhlenburg College, and John Marshall, M. D., Demonstrator of Chemistry, Medical Department, University of Pennsylvauia. Cloth; pages 100, with Illustrations. Price, $1.00. Philadelphia: Presley Blakiston, 1881. For Sale by John Moore, Ann Arbor.

The number of small works devoted to the urine is becoming almost unlimited, and there is great similarity in them. But the new claimant now before us has some points of great advantage over most of its predecessors. The authors are chemists; while the majority of these little books are written by men almost wholly ignorant of the subject of chemistry. Again, this little volume is devoted exclusively to the chemical analysis of the excretion. We have examined it with care and find that it is up with the times and accurate. There are some disadvantages which are inseparable from excessive brevity. Broad statements are made, which, as they stand, are not strictly true and are liable to seriously mislead the student. For instance on page 10, we find this statement: "On boiling, normal urine should remain clear." From this the student will infer that if the urine becomes cloudy on being boiled (as normal urine passed after the midday meal most generally will), it is abnormal. Brevity of expression is desirable, but it should never be purchased at the expense of clearness and accuracy. However, there are but few of these sources of error. In some few places the proof reader has failed to do his duty. On page 13, we are told that the urine may deposit among other things, "infusoria, fibrin, sarcinia ventriculi, Goodsir." The last mentioned is a new constituent of urinary deposits. These mistakes are trifling and we mention them in order that they may be corrected in future editions. We most heartily endorse the work.

SELECTED ABSTRACTS.

ON THE HOMŒOPATHIC QUESTION.

What of homœopathy? A matter long since settled. No one has any legal right to control a physician's prescriptions, and if he thinks his experience justifies it, he may prescribe the tenth dilution of the mother tincture if he likes. Why not? Faith makes one happy—the patients, too, are made happy (in this or in that sense of the word), and homœopathy never did a doctor any harm. Can we, then, oppose homœopathists as such? Assuredly not, just as little as we have any means of preventing any other form of incorrect prescription. Science, however, has not hesitated to stigmatize homœopathy; and the foremost teachers of therapeutics have cast homœopathy to the dogs, after most conscientiously weighing its merits; many have not hesitated to adopt the skepticism of Skoda, but none have been induced to accept the self-delusive theory of Hahnemann.

The homœopathy of to-day is no science, not even a dogma—just a trade; and many a one to whom allopathic practice came in homœopathic doses has become great by the homœopathic treatment of those who believe in him.

But what is the homœopathy of the present? They give arsenic in small doses in skin diseases, and never push mercury to the extent of producing disturbing symptoms. Well, who does not do the like?

They sweeten expectant treatment with globules of sepia or the like, but they no longer "hold fast to the law of similars" (from which, however, their theory got its name!); they only assert that certain remedies act differently in small doses from what they do in large. Well, no one disputes this.

They also say that, "in reference to medicinal action, dilution can only be carried to a certain limit, beyond which all action on the human frame must cease, as indeed self-evident." This sounds quite rational, quite allopathic!

We don't know what the Viennese homœopathists think, but those in Berlin have begun to go quite in the teeth of poor Hahnemann.

But what remains to homœopathy when its fundamental principle, pure and simple, is denied?

Nothing, truly, save the favor of the public, who so fondly doat on marvels, and love to be cured homœopathically. We look for some manifestation from our Viennese homœopathists, who of late have become quite modest. Is the term "homoeopathic physician" any longer to be sported as the sole relic of the shipwrecked system?

This might, indeed, be a case of rejoicing; whether it would be honorable, we need not waste words in discussing. *Mundus vult decipi, ergo decipiatur* is a truly practical motto, but what about its morality.—*Wienner Medizinische Wochenschrift*, Number XXXI, page 902.—*Edinburgh Medical and Surgical Journal.*

THE USE OF QUEBRACHO IN DYSPNŒA.

Dr. Andrew H. Smith, Chairman of the Committee on Restoratives of the Therapeutical Society of New York, has submitted on behalf of the committee a report, founded on clinical data, on the use of quebracho in dyspnœa, which is published in the *New York Medical Journal and Obstetrical Review*, for September, 1881. Of the thirty-two cases covered by the report, eleven were of spasmodic asthma, with or without emphysema and bronchitis. Of these, in nine cases the dyspnœa was notably relieved. In two cases of asthma associated with bronchitis no benefit resulted. One patient with emphysema and bronchitis without asthma was relieved. One with bronchitis with obesity was not relieved. Two with mitral insufficiency were not relieved. One with mitral stenosis was not relieved. One with hypertrophy with dilataltion was not relieved. In two cases of cardiac disease (form not stated) the dyspnœa was not relieved. In one case of fatty heart there was a slight relief. Two patients with dyspnœa depending upon

Bright's disease, in one of whom pulmonary œdema was noted, were relieved. In one case of aortic aneurism the dyspnœa was relieved till near the close. In one case of tonsillitis the dyspnœa, partly nervous, was relieved. In one case of cancer of the lung dyspnœa was relieved. In two cases of pneumonia it was relieved. One patient with hysterical dyspnœa was relieved. In one case of catarrhal phthisis, second stage, the dyspnœa was relieved. In one case of catarrhal phthisis, third stage, it was not relieved. In one case of intermittent fever with old pleurisy, the patient being an opium-eater, the dyspnœa was increased. Thus, of the thirty-two cases of different diseases in which dyspnœa formed a prominent feature, this symptom was relieved to a greater or less extent in twenty-one; not relieved in ten; aggravated in one. In some instances the treatment was not pushed far enough to give a decisive result. It is possible that the nausea observed in some cases might have been avoided by the use of smaller doses, and perhaps a favorable result obtained. The fact that dyspnœa depending upon such a variety of causes may be relieved by quebracho points, says the writer, to the respiratory center as the seat of its action. Apparently it blunts the sense of want of air, and thus mitigates the suffering from a deficient supply. But this action is not necessarily only palliative. Exaggerated respiratory efforts are often in themselves an evil, not only on account of the muscular effort expended, but from the inspiration of blood into the thoracic viscera, which results especially when the dyspnœa is caused by narrowing of the air-passages rather than by solidification or compression of the lung. Hence in many cases an agent which will moderate the violence of the respiratory movements will not only lessen the distress of the sufferer, but will increase the chances of his recovery. That quebracho will often very promptly fulfill this indication there seems to be no room to doubt, while as yet there is no evidence that it is liable to produce unfavorable after-effects. The extremely disagreeable taste of the medicine and its tendency to produce nausea are, however, serious drawbacks to its use by the mouth. As yet, we have no record of its employment by the rectum. If the active principle is isolated, so that it can be used hypodermically, a great advantage will have been obtained.

ON INDUCTION OF ABORTION AS A THERAPEUTIC MEASURE.

Dr. Priestly read a paper before the Obstetrical Society of London on the above subject. The author considered that the indications for the induction of abortion as distinct from the induction of premature labor had never been laid down with sufficient precision in this country (*Medical Times and Gazette*). It was usual to say that each case must be judged on its merits, and this lack of rules might unfortunately lead to serious abuse. Examples had repeatedly come within his knowledge where abortion had been provoked for reasons which seemed to him quite inadequate. Though the medical man was no doubt acting in good faith in these cases it would have been difficult to sustain his action in a court of law. For instance, in one case abortion was induced at the fourth or fifth month on account of a bad rupture of the perineum at the last confinement. In a succeeding pregnancy a sound was introduced with a similar object at the end of a month. This, however, had no effect, and she went the full term, and had an easy and natural labor. In a second instance an attempt was made to induce abortion at the second month because the patient had aborted not long before, and it was feared that pregnancy had recurred too speedily, while a much-desired journey would have to be postponed if miscarriage recurred at the same period as before. Fortunately the attempt failed, and the patient went to her full term. It was often necessary to remind wives and mothers that even spontaneous abortion is sometimes more damaging to health than natural parturition, more frequently lays the foundation of disease, and, if repeated, abridges the period of youth and comeliness. These risks were necessarily greater if abortion was induced. The reasons which may be adduced as justifying the induction of abortion are the following:

(1) Pelvic deformity so great as to preclude the birth of a viable child.

(2) Narrowing of the genital canal by tumors, cicatrices, or cancer, so as to prevent the passage of a viable child. Great care was here necessary to not over-estimate the amount of obstruction. If a series of cases of Cæsarian section with fair success should occur the reasons for inducing abortion in such instances would be undermined. In cases of cancer there was fair ground for this operation, since the woman had but a short time to live in any case.

(3) In obstinate vomiting of pregnancy, when all other expedients are fruitless, and a fatal result is anticipated if relief cannot be afforded.

(4) In eclampsia, abortion should only be induced as a last resort to save life.

(5) In irreducible retroversion or retroflexion of the gravid uterus, but only when life is seriously threatened, not merely the displacement is irreducible.

(6) In severe hemorrhage.

(7) In certain other diseases where the complication of pregnancy is undoubtedly endangering life.

The responsibility of inducing abortion should never be undertaken without a consultation of two or more medical men, and Mr. Tarnier had even suggested that a legal declaration should be made to the public prosecutor in every case.

He would lay it down that the induction of abortion is only legitimate when the life of the mother is so imperiled by the continuance of pregnancy that emptying the uterus presents itself as the only alternative to save the mother. In insanity, chorea, and the like, the proper treatment was probably to treat the morbid conditions, and leave the pregnancy to take care of itself.—*Obstetric Gazette.*

BOTTLE IN THE RECTUM.

Dr. Rodenstein (*Annals of the Anatomical and Surgical Society*), reports the case of a coachman who, as a releif for hemorrhoids, introduced a six ounce bottle, four and a half inches long and two and one-eight inches in diameter, into his rectum. The bottle slipped from his grasp and after twelve hours, during which time the man mowed grass, Dr. R. was summoned to removed the bottle. The bottle could be felt with the fingers but the pressure of the sphincter was so great, that the hand of the operator was benumbed, and all attempts to pull the bottle out were of no avail. Chloroform was administered, when, as soon as relaxation followed, the bottle slipped through the sigmoid flexure and passed on until it became fixed at the right iliac fossa at the cæcal pouch. It was now determined to push the bottle back. The arm of one attendant was introduced into the rectum up to the elbow in order to guide the manœuvre. By this means, aided by the bearing down efforts of the sufferer (who had now recovered from the influence of the chloroform) the physicians were able to effect a delivery.

RECENT ADVANCEMENT IN TREATMENT OF SKIN DISEASES.

Dr. Jamieson (*Practitioner*) gives a review of this subject from which we gather the following facts:

Sulphide of calcium has been much praised by Ringer in hastening the maturation of boils which have already appeared, and in preventing the formation of new ones. Bulkley praises the same remedy in hordeolum or stye, several of which are likely to form in succession on the lid. The sulphide of calcium is an unstable salt, and it may be that the sulphur set free, while in its nascent state, has a special influence on the peri-glandular plexuses, and on the migration, fatty degeneration and death of the exuded leucocytes.

Vaseline is much superior to lard as a basis for ointments, as it does not become rancid and irritating. It has one objectionable feature in its want of solidity. An almost perfect basis for ointments is made by mixing cold cream, made from oil of almonds, white wax and spermaceti with vaseline, in suitable proportions. This does not become rancid and remains solid at all temperatures. Vaseline is volatile at the temperature of the body, yet when a thin ointment is needed, as in applications to the scalp, there is perhaps no better basis than vaseline alone.

In employing chrysophanic acid in psoriasis it should be remembered that a little of the ointment well worked into the patches previously cleared of the scales. does infinitely more good and less harm than a great deal dabbed in. Alizarin substituted on chemical grounds for chrysophanic acid has not found much favor; but pyrogallic acid is of more value, though not well adapted for application to extensive surfaces. Since it does not irritate and inflame the conjunctivæ, it is more suitable than chrysophanic acid for psoriasis affecting the scalp and face, and may be used in the strength of one drachm to the ounce. Besides its value in psoriasis, pyrogallic acid seems also to exert a slowly destructive action on some forms of new growth, especially those which are allied in a somewhat natural class, grouped around the sarcomata. It causes these to gradually wither away.

When burns of the skin do not advance beyond the first grade, a coating of flexible collodion serves to protect the vesications from rupture, and in no way interferes with treatment by cotton wool. Flexible collodion is also of value in chronic eczema of the palms, where it lessens the itching and helps the fissures to heal.

Pure glycerine freely diluted with water is an emollient, and the best remedy we have for that dry and fissured state of the cuticle occuring in the hands and face and legs during frost, or when east winds are prevalent. The same soothing effect is produced by a combination of glycerine and starch.

Acetic acid in a diluted form renders albuminous tissues transparent, but has not much effect upon the outer horny layer of the epidermis. Unna has very successfully applied this to the treatment of a "bad complexion." Where there is some degree of acne punctata and comedoned, he employes a paste consisting of four parts of kaolin, three of pure glycerine and two of vinegar.

Warts on the hands are best removed by chromic acid, one part to one of water. The skin around each wart is first protected by painting it with oil, and then the wart itself soaked with the solution of chromic acid, this absorbs the water and the wart soon disappears.

Chaulmoogra oil is of some value in those cases of eczema which have past the moist stage and tend to become dry. The best results with it have been obtained in the strumous forms of eczema of the face in children. It is used as an ointment in the proportion of a drachm to the ounce of glycerine, starch, vaseline or simple ointment.

Sulphurous acid is the best remedy in eczema marginatum.

The acid should be fresh, and should be kept in well stopped bottles, as it oxidizes and its value is lost. It should be freely sponged on the parts several times a day, and it soon lessens the itching and finally cures the disease. Tinea tonsurans of the head in children is easily relieved when seen early, by blistering with a cetum cantharides, or by the use of glacial acetic acid, either pure or slightly diluted with spirit; but in more obstinate cases a six per cent. solution of the oleate of mercury may be found serviceable, and in cases of still longer standing it may be necessary to produce pustular eruptions with croton oil.

Volkmann of Halle, has introduced a sharp spoon or dermal curette for removing lupus, epithelioma, rodent ulcer, etc. It is more reliable than caustics, as the latter are liable to remove healthy tissue also. Small, fresh spots of lupus, appearing as red, jelly-like nodules, are treated auspitz by puncturing with a needle, which has been dipped into a solution of iodide of glycerine, one part to twenty.

"Port wine marks" may be removed by pricking with a bundle of needles dipped in a solution of carbolic or chromic acid of from twenty-five to forty per cent.

ON EXTRACTING FOREIGN BODIES FROM THE EAR.

Mr. M'Leod details a plan, in the columns of the *British Medical Journal* for July, 1880, page 50, similar to that suggested, by Dr. Lœwenberg in *The Lancet*, June 1872, page 774, namely, causing a tractor to adhere to the foreign body by means of glue or cement. A cherry stone was firmly impacted in the meatus. Mr. M'Leod cut a small piece of leather, attached it to a thread, and covered it with a strong cement; pressing it firmly down on to the foreign body, he waited until the cement was set, and then, by firm and steady traction, removed the fruit-stone.—Richard Neale, M. D., in the *London Medical Record*, October 15, 1880, page, 428.

MISCELLANEOUS ITEMS.

We have used lactopeptine largely in cases of indigestion and diarrhoea in children, and have found the preparation to be of great value.

The elixirs, emulsions and syrups, prepared by Farrand, Williams & Co., of Detroit, have in our hands always proven agreeable to the patient and effective in action.

Dr. Henry Sewall, assistant professor of physiology in Johns Hopkins University, has been appointed professor of physiology in the department of medicine and surgery of the University of Michigan.

G. W. Long, M. D., of the class of 1881, University of Michigan, recently died of phthisis palmonalis, at his home in Dearborn, Michigan. Dr. Long was a young man who worked his own way through college, and was universally esteemed for his kindness of heart and thoroughness in his studies.

If any of our readers have not used Wyeth's pellets for hypodermic use, they should try them immediately. With them there is no possibility of poisoning a patient by the injection of a partially decomposed fluid. We have used the pellets for six months and have never found any reason for returning to the old method.

We desire to call the attention of our readers to our clubbing rates with the American edition of *the London Lancet*. Hitherto we have steadfastly refused to club with other medical journals; but the superior value of the *Lancet* has led us to make an exception in its favor. The Physician and Surgeon and the *London Lancet* will both be furnished at $4.50 per year.

The Regents of the University of Michigan have arraigned Dr. Franklin, professor and late dean in the homoeopathic school, upon several charges; one of which is the giving of a false certificate of time to a student so that a diploma might be obtained before the expiration of the time required for attendance upon lectures. December 6, has been appointed for an examination of these charges.

Physicians and druggists desiring fine printing at low rates, will do well to consult our schedule of prices, which will be found in the advertising department of this journal. We make a specialty of medical printing and have facilities for executing work in a superior manner. Our rates are lower than those of any printing house in Michigan, and we respectfully solicit a comparison of the same. We also do binding, and physicians desiring volumes of this journal bound in first-class style at extremely low rates will save money by corresponding with us.

The Secretary of the University of Michigan informed us a few days ago that the number of students registered for the department of medicine and surgery was three hundred and eighty. This is the same mumber matriculated last year. Of the first year students entering this fall, all but twenty-four entered on diploma, college standing or teacher's certificates. Of the twenty-four examined eight were "plucked." These eight will probably enter some medical school which requires an examination in the classics and higher mathematics. Sixty-five students have entered the homoeopathic department, where the number last year was eighty-eight.

THE

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ORIGINAL ARTICLES.

PRACTICAL OBSERVATIONS ON OVARIOTOMY WITH NOTES OF TEN RECENT CASES.

BY DONALD MACLEAN, M. D.,
Professor of Surgery and Clinical Surgery in the University of Michigan.

In this paper it is my intention to consider briefly certain practical matters in relation to the operation of ovariotomy.

Having for some years past devoted a good deal of attention to this subject I had much pleasure in meeting with Dr. Thomas Keith of Edinburgh last year, and in seeing him operate on several cases and I have to acknowledge my indebtedness to that distinguished surgeon for numerous valuable suggestions which I have since adopted in my practice and which I am desirous of communicating for the benefit of others.

Within a period of nine months I have performed ten ovariotomies and previous to that time I had done sixteen. Of the last ten cases, seven recovered. In the management of these ten cases I have to some extent tested several of Dr. Keith's methods and appliances and am convinced of their great value.

First of all I desire to say that in my opinion the operation in question requires for its successful performance so much surgical experience and dexterity, such carefully arranged surroundings, so many appliances and such perfect preparations in all respects that its practice should be confined to a comparatively limited number of surgeons who should be in the truest and best sense of the term *specialists*.

Of late years I am sure that the operation has been notoriously abused in this and other states. It would be an easy matter to collate a long list of unpublished cases operated upon under circumstances which rendered success an exceedingly remote possibility, and in which, as a matter of fact, the rate of mortality is almost one hundred per cent. Unless a surgeon is so situated as to give him in point of experience, surroundings and equipments, special advantages for performing ovariotomy, justice, to all concerned, demands that he should refrain from recklessly attempting to gratify his personal ambition at so great a risk to his patient's life.

A case is well known in this state where a young woman was taken into a doctor's office and operated upon with hardly any appliances beyond a common pocket case, the sponges had been long in use for general surgery and were anything but antiseptic, and after the operation the doctor took his patient in his arms and carried her across the street and up a stair to her own bedroom. Next day she was dead. This case has not been published, but I am in a position to substantiate the main facts as stated here.

No doubt this was an exceptional instance of unprincipled recklessness, but many cases have been operated upon in this and other states within the last few years, in which, in reality, the patients were afforded little if any better chances for their lives.

The remarkable success of certain celebrated ovariotomists, has been attributed to the cautious manner in which they have selected their cases. declining to operate whenever the difficulties and complications of the case have seemed to endanger the chances of success.

My own conviction is, that the care and thoroughness with which they prepare themselves and their patients, in each and every instance, furnish the true explanation of their success, and I am sure that their example has not been followed as universally as it ought to have been.

The practical points which I wish to refer to more particularly at present are the following:

(1) The anæsthetic and its mode of administration.
(2) Antiseptics.
(3) Treatment of the pedicle.
(4) Management of adhesions.
(5) Drainage of the peritoneal cavity.

(1) *The Anæsthetic.*—In common with Dr. Keith and others I have generally used ether in this operation, but in my later cases, chloroform. By the use of a very simple apparatus, I believe that chloroform may be used in ovariotomy and in all other operations with as much safety and satisfaction as any other anæsthetic.

This apparatus consists of two parts; (1) an inhaler made by stitching a piece of canton flannel over a wire frame which fits like a small tent over the patient's nose and mouth; (2) a dropper which consists of a two-ounce bottle with a perforated cork and two metal tubes, one of which merely admits air to the bottle, while the other permits the chloroform to escape drop by drop. By this means I believe that the greatest degree of safety is secured as well as the utmost economy of chloroform.

(2) *Antiseptics.*—In the cases of ovariotomy which I saw Dr. Keith perform he used all the Listerian antiseptic appliances. I could see, however, that he was beginning to doubt as to its expediency. He assured me that he had seen patients die with "brutal haste" from carbolic acid poisoning, and I believe that I can say the same myself. Since then, (as is now well known) he has laid carbolic acid aside to a great extent, if not entirely, and prefers to trust to the careful arrest of hemorrhage and the thorough drainage of the peritoneal cavity.

My own limited experience hardly justifies me in expressing a decided opinion on this important point, but, unless there are special reasons for doing so. I shall not hereafter resort to the use of the carbolic acid spray, against which several serious objections have been justly urged. My belief is that by exercising due care in arresting hemorrhage, sponging out the peritoneal cavity till it is absolutely dry, and in making provision for the escape of effused fluids, the danger of septicæmia is sufficiently provided against.

Blood poisoning has occurred in spite of all antiseptic precautions, and it has been escaped in cases not treated antiseptically and in which the circumstances seemed highly favorable to its development.

(3) *Management of the Pedicle.*—In my sixteen cases I had transfixed the pedicle with a double ligature and tied it in two halves, cutting the ligatures off short and dropping the pedicle into the pelvis.

So far as I know, this method of treating the pedicle proved satisfactory. I have never seen any bad results follow from this source. Nevertheless, Dr. Keith's method has seemed to me to be, although somewhat slower, still on the whole, much more safe and satisfactory.

He first of all seizes the pedicle in one or two pairs of strong forceps with a catch in the handle. If the pedicle is narrow, one pair; if broad, two; so that the vessels are safely controlled for the time. He then cuts away the tumor, and then he applies his clamp to the pedicle on the cardiac side of the forceps, which latter he then removes, leaving at least one and a half inches of the pedicle projecting beyond the clamp. To this projecting part of the pedicle the actual cautery is applied in the form of a solid mass of iron at a black heat, which slowly sears and shrivels up the tissues of the pedicle.

This part of the procedure is conducted with the utmost care and deliberation, and is sometimes the longest part of the whole operation.

The clamp is formed of two solid metallic bars furnished with a screw by which they are made to compress the pedicle with great tightness. There are also two wooden handles to the clamp by which the surgeon holds it in his left hand while he applies the cautery with his right.

During this part of the operation the peritoneal cavity is filled with soft sponges, and the edges of the wound are held in apposition by the hands of an assistant. Between the abdominal wall and the lower surface of the clamp, a pad of wet cloth is placed to ensure its thorough protection from the action of the cautery. The pedicle is gradually shrivelled up and the debris wiped away until all of the pedicle external to the clamp is disposed of. The latter is then unscrewed and removed while the surgeon takes care to retain control of the remainder of the pedicle until he has carefully examined it and satisfied himself that there is no tendency to bleeding. If there is any doubt on this point, the pedicle should be transfixed and securely tied, either with strong catgut or a silk ligature. All danger of hemorrhage being in one way or the other guarded against, the pedicle is permitted to subside into the pelvic cavity.

(4) *Treatment of Adhesions.*—The only point I wish to note on this part of the subject is the vital importance of securing every point that shows the slightest inclination to bleed. Much patience and perseverance are sometimes required for this part of the operation, but, it is impossible to overestimate its urgent necessity. The best ligatures to use, in this situation, are those made of carbolized catgut. They are of course, cut off close to the knot.

(5) *Drainage of the Peritoneal Cavity.*—The only method of drainage now resorted to is that by means of a glass tube, the lower end of which rests in the Douglas cul de sac, while the other projects through the lower end of the wound in the abdominal wall.

The drainage tube may often be dispensed with, and the operator will always be glad to omit its use when he feels that he can do so with safety. In cases where there is any prospect of extensive effusion, especially if there is reason to fear oozing of blood, the drainage tube is *indispensable.* It was first used by the late Professor Peaslee, but at least one fundamental alteration has recently been made in his method of using it. Peaslee kept a plug of carbolized cotton in the mouth of the tube, and he removed this from time to time and allowed the accumulated effusions to escape. Now, the effusions are not permitted to accumulate, the mouth of the tube is always kept free and the effusions are provided for by the application of a large soft carbolized sponge over the end of the tube. The sponge is enveloped in a sheet of rubber cloth which has a hole in its center through which the end of the drainage tube projects. The fluids are thus caught in the sponge, and at stated intervals the nurse unfolds the rubber sheeting and replaces the saturated sponge with a clean one. In this way the fluids are got rid of as soon as secreted, and at the same time their quality and constitution afford valuable information to the surgeon. Just as soon as all appearance of effusion has ceased the tube may be removed and the opening closed with a hare-lip suture. This will sometimes occur as early as the fourth or fifth day.

If the discharge from the tube presents any signs of becoming purulent, the peritoneal cavity may be washed out with a weak solution of carbolic acid and common salt; a drop or two of the former and five grains of the latter to a pint of water at a temperature of 100° Fahrenheit. This is an expedient which in my experience never fails to afford material relief and comfort to the patient.

Case I.—The first of the ten cases referred to above, was that of Mrs. S., of Scio, Washtenaw county, Michigan. Mrs. S., age forty, is the mother of ten children, the youngest ten months old at time of operation. Has always been a strong and healthy woman. After the birth of her last child, patient noticed a round, movable and painless swelling on the right side. This swelling increased rapidly and towards the end of the year 1880, Dr. John Lee, of Dexter, was consulted. The Doctor diagnosed an ovarian tumor and invited me to see the patient in consultation. Ovariotomy was at once recommended and was readily assented to by the patient. December 24th was fixed upon for the operation, and on that day with the assistance of Dr. Lee, Dr. A. M. Maclean and some of the hospital assistants, I performed ovariotomy. The tumor was polycystic and altogether weighed nearly forty pounds. All antiseptic precautions were used. The operation was performed at the patient's home, which is an ordinary farmer's residence situated five miles from Ann Arbor.

No serious adhesions were encountered. The pedicle was treated by the clamp and cautery in the way I have already described. No ligatures were used. Intense engorgement of the parietal layer of the peritonæum existed throughout its whole extent. The peritoneal cavity was sponged perfectly dry before the wound was closed. Six silk and seven horse-hair sutures were used in closing the incision. The external dressing consisted of: (1) Lister's oil silk protective; (2) Lister's antiseptic gauze; (3) Lister's Mackintosh; (4) a flannel bandage.

The drainage tube seemed to be unnecessary and was dispensed with in this case.

Patient rallied well from the shock, the wound healed by the first intention and the case was dismissed *cured* in two weeks, and patient has continued to enjoy excellent health ever since.

Case II.—Miss B. F., age forty, unmarried; residence Brigden, Ontario. First consulted me April 8, 1881, when the following facts were elicited: Has never been very strong, but has always worked hard. Has never had much medical treatment. Has had ague occasionally and bilious headaches. Has always menstruated with great regularity and profuseness. Bowels have always been quite regular until lately. Has had diarrhœa for about two weeks.

July 1, had a severe attack of abdominal pain, was very "bloated" before the attack. The pain commenced a little below the umbilicus and extended quite rapidly all over the abdominal surface. This pain was intense. Patient could not lie down, and could not bear the slightest pressure while it lasted.

Dr. House of Alveston, treated patient through this attack. He afforded her immediate relief by the administration of morphia internally. Has had four such attacks.

Six months ago, (October 16, 1880), patient consulted Dr. Ross of Alveston, who expressed the opinion that an ovarian tumor existed.

A few days ago a surgeon in Detroit was consulted but declined to give any opinion until he had tapped her.

On examination I found the abdominal cavity distended to its utmost capacity by fluid which fluctuated freely in every direction *except when tested through the vaginal or the rectal walls.* Uterus normal in all respects. By making sudden and deep pressure on the right side, a solid mass could be indistinctly felt. Patient looks anæmic and somewhat cachectic. The diagnosis was "ovarian tumor, probably multilocular with a long pedicle, complicated with abdominal ascites." I could not account for the fact that no fluctuation could be felt either from the vagina or the rectum. This mystery, however, was satisfactorily solved at the operation.

May 7, 1881, ovariotomy was performed in presence of the medical class. The patient's whole body was effectually concealed from view, with the exception of an oval space extending from the umbilicus to the pubis. A sheet of Lister's antiseptic Mackintosh five feet in length, having an oval aperture five inches long and four broad is applied over the body, thus protecting it from exposure as well as from contact with blood and other fluids. The edges of the oval aperture are carefully and precisely glued to the abdominal wall so that the whole covering is thereby held firm and unmovable during the whole of the operation. The one end of the sheet is towards the patients face, and the other hangs over the feet into the tub and serves to conduct the fluids in that direction, so that at the conclusion of the operation. all parts of the patient's body and clothing are perfectly unsoiled. The usual incision was then made into the peritoneal cavity, and a large quantity of ascitic fluid evacuated. A solid ovarian tumor was then met with, just large enough to fit like a valve into the brim of the pelvis *thereby accounting for the fact that the ascitic fluid was all contained in the abdominal cavity.* The pedicle was just long enough to hold the growth firmly in this peculiar position. The pedicle was treated by the clamp and cautery.

No ligature nor foreign body of any kind was left in the peritoneal cavity, which was sponged perfectly dry.

The wound was closed with deep silk and superficial horse-hair sutures, and the antiseptic dressings were applied as in the former case. The spray was used throughout the operation.

For the first few days after operation all went well, temperature ranging between 100° and 103,° pulse between 90 and 100. On the fifth day the bowels moved spontaneously, and they continued to do so every day afterwards. At the same time, however, the temperature went up to 103, and sometimes 104½, and the pulse to 110. The appetite which had been moderately good failed very much, and the patient lost flesh, and suffered from a low form of delirium, especially at night. Fluid nourishment and stimulants were freely administered by the mouth and rectum, and hypodermic injections were given to relieve pain.

On the twelfth day after operation I detected through the rectum, a hard mass in the cul de sac and suspected a rapid and malignant return of the tumor which had presented all the clinical appearances of sarcoma. (Through an unfortunate accident it was lost before being subjected to microscopic investigation.) The swelling certainly did not fluctuate, and therefore there was nothing to do but to wait for developments. The swelling gradually disappeared and with it all the patient's bad symptoms, so that on May 30, the twenty-third day after operation she was able to walk into the amphitheatre, on which occasion her pulse was 80, and her temperature 98½, and on June 4, the twenty-eighth day after operation she was dismissed cured and is now enjoying better health than ever before.

Case III.—Mrs. B., aged forty-six, widow, former residence Burr Oak, Michigan. Admitted May 15, 1881.

History: Has been a hard working woman. Enjoyed good health until three years ago. Has two children (twins, age fifteen years.) Menopause three years ago. About six months previous to the change of life a tumor was discovered in the region of the right ovary, and since then it has continued to increase and give serious annoyance,

Examination: Patient was much emaciated and worn; the lower extremities greatly distended by œdema throughout their entire length; abdomen greatly enlarged, measuring at umbilicus seventy-three inches in circumference. The abdominal wall had ulcerated through below the umbilicus and a fœtid purulent discharge passed away continuously. Several large fluctuating cysts could be distinctly traced by palpation. The mass as a whole, was firmly fixed. Per vaginam the pelvis was found to be packed full of the tumor, the uterus being fixed and very low down. Numerous tense cysts could be distinctly felt through the wall of the rectum. On enquiry it was learned that the patient had been tapped twenty-three times prior to admission to the hospital.

My first decision in regard to this case, was that it had to be classed with the practically impossible cases, and that my duty was to let it alone, and the final result demonstrated that I was right.

The unfortunate woman was full of hope and courage, even after I had positively declined to operate and had explained to her as clearly as I could the extreme improbability of her surviving the removal of her tumor. While hoping for the best, and exceedingly anxious to have the one chance of relief afforded her, she was also fully prepared for the worst, and at last I endeavored to persuade myself that she might prove to be one of those rare cases that manage to get well in spite of the most unpromising prognostications, and on May 20, I operated.

Universal adhesions, abdominal as well as pelvic, were met with as expected, many suppurating cysts were evacuated, masses of colloid and of inflammatory exudates were scooped out and finally the uterus and all its appendages were removed along with the immense tumor, the solid part of which alone weighed upwards of fifty pounds.

The patient never fully rallied from the shock, and died the same evening. Should a similar case occur to me hereafter, I shall consider it my duty to all concerned, to positively refuse to operate. In this case it is evident that the patient had everything to gain, and really nothing to lose by the operation, and so far as she was concerned there was no room to regret the operation, but there are other interests which demand just consideration, and I do not think that a surgeon is warranted in damaging his own reputation, and what is of far more importance, bringing discredit upon a truly beneficent operation by undertaking to accomplish impossibilities.

Case IV.—Mrs. T. M., aged thirty-two, married, residence Jackson county Michigan. Sent to me April 27, by Dr. Main of Jackson. Has two living children and has had two miscarriages, the last nine years ago. The children are aged thirteen and four respectively. Has generally enjoyed good health. First detected tumor three years ago, in left side. It was somewhat painful when first observed. Was tapped in February, 1878, again in June of the same year, and lastly six weeks previous to the date of my first examination. Was much relieved by each tapping. After the second one patient could distinctly feel a hard mass in the left groin.

At last tapping only a pint of fluid was withdrawn but even that gave a good deal of relief. Menstruates regularly, bowels regular, appetite very good. The feet and hands have been swollen a little at times. The patient's general appearance is that of a perfectly healthy woman, with the exception, of course, of the marked enlargement of the abdomen. The circumference at the umbilicus was fifty-four inches. From the ensiform cartilage to the pubis the measurement was just eighteen inches. The tumor filled the abdominal cavity completely. Several large, freely fluctuating cysts could be traced externally. No signs of adhesion could be detected. The uterus was natural in all respects. The case seemed a highly favorable one for operation.

May 5, I operated at Jackson in a small new house selected by the patient's friends. Drs. Main, Williams and Kimball (Mrs.) were present and assisted; also my regular assistant, Dr. T. J. Sullivan, of Ann Arbor, with Messers. E. W. Lee, S. Graves, and J. Russell, members of my hospital staff. All antiseptic precautions were used. The operation was conducted in the usual manner and no difficulty of any kind was encountered. The pedicle was treated by the clamp and cautery, and the peritoneal cavity was cleansed and sponged out with the utmost thoroughness.

The patient awoke from the chloroform almost immediately after having been returned to her bed, and she expressed herself as feeling very comfortable. I left her some hours afterwards with a feeling of unusual confidence in her speedy convalescence.

The further details of her history are furnished by the following postal cards, kindly forwarded to me by her skillful and efficient attendant, Dr. Main.

[Number 1.]

JACKSON, May 5, 10 P. M.

All right. Temperature 99½°. Pulse 120. Sleeps most of the time. Feels a little faint and exhausted, but pulse good.

J. T. MAIN.

[Number 2.]

JACKSON, May 6, 5 A. M.

Patient went through night well. Feels faint still—at her stomach she says. Complained of pain once and nurse gave one-sixth grain morphine. None since. Pulse 100, rather weak. Temperature 99°. Abdomen flat. All appears well.

J. T. MAIN.

[Number 3.]

JACKSON, May 6, 3:30 P. M.

All is well. Pulse 90. Temperature 101° Respiration 20.

Abdomen flat. Not quite so faint. Takes water one part, milk two (2) parts in teaspoonful to dessertspoonful doses every half hour when awake. It proves grateful. J. T. MAIN.

[Number 4.]

JACKSON, May 6, 9:30 P. M.

Appears still better. No pain. No opiate. Pulse 96. Temperature 99¼. Respiration 22. J. T. MAIN.

[Number 5.]

JACKSON, May 7, 8:30 A. M.

Patient doing well. Has same "faint spells." No pain. Pulse variable; sometimes more, sometimes less rapid for a second or two. Pulse 98. Temperature 98¾. Respiration 20. Give milk and dilute beef tea in small quantities. No. pain.

J. T. MAIN.

[Number 6.]

JACKSON, May 7, 3:35 P. M.

Patient had a faint turn for an hour or two. All right now. Pulse 100, variable. Temperature 99¾. Respiration 20. Abdomen flat. Have increased milk somewhat and added a teaspoonful or two of strained oatmeal gruel every half hour to hour. J. T. MAIN.

On Monday morning, May 9, I was much shocked by receipt of a telegram from Dr. Main, stating that our patient, Mrs. M., had died suddenly that morning shortly after midnight. A letter from the Doctor next day informed me that all had apparently gone on well up to his evening visit on Sunday May 8, and that when he was called hastily through the night he found her just expiring.

A partial examination of the wound was made and on removing the lower sutures a small quantity of sanious and fœtid fluid escaped. Unfortunately a full autopsy could not be obtained. Had those stitches been removed during life, or had the drainage tube been employed at the time of operation. the result might have been different, After this operation I suffered from renal hemorrhage and other symptoms of carbolic acid poisoning which prevented me from revisiting the patient after the operation, possibly carbolic acid poisoning had something to do with the unfortunate issue; I don't know. The case was to all appearance a favorable one for operation and the disappointment and grief were proportionately intense.

Case V.—On April 28, 1881, being in East Saginaw on professional business, I was asked by my friend Dr. Williams, to see Mrs. T., who was supposed to have an ovarian tumor, and who gave her history as follows: Age is twenty-two, has been married five years, but has never been pregnant. Has always menstruated regularly, but painfully. Three years ago noticed abdominal enlargement without any other symptoms. Has had no pain and no swelling of the feet or legs. Of late the tumor has been troublesome owing to its size, and she has suffered a good deal from dyspepsia and is losing flesh. Some months ago all arrangements for ovariotomy were made by a local surgeon, who however failed to secure anæsthesia and consequently abandoned the operation. On examination an ovarian tumor was very easily diagnosed. It seemed to be monocystic or nearly so, movable; no adhesions, a long pedicle, uterus quite natural; in short a very favorable case.

By preconcerted management the patient came to Ann Arbor, and on June 2, I operated with the aid of Dr. Williams of Saginaw, Dr. Sullivan of Ann Arbor, and two or three of my hospital staff.

No trouble was experienced at any stage of the operation. Patient passed easily and pleasantly under the influence of chloroform and the operation was executed in the usual manner, and in a comparatively short time. One large cyst and some smaller ones were found. The pedicle was very thick and vascular, and although the cautery was employed with the utmost care and deliberation, there seemed still to be a tendency to hemorrhage. I therefore transfixed the stump of the pedicle with a strong double ligature and tied it securely in two halves, cutting the ligatures close to the knot. I then dropped the stump into the pelvis. No other ligatures were used. There was hardly any fluid in the peritoneal cavity, but what there was I sponged out to the last drop. The wound was then closed with deep silk and superficial horse-hair sutures and Lister's dressing applied.

The operation was performed under the spray.

On the evening of the day of operation the pulse was 104 and the temperature 103. At 7:30 next morning the pulse was 104 and temperature 99½. Next morning pulse 80. temperature 99, and these figures were maintained for several days when both pulse and temperature became normal and continued so until patient was dismissed in excellent health and spirits, just two weeks and one day from the day of operation.

I should state however, that for three or four days after the operation this patient complained of nausea, and she repeatedly vomited or belched up mouthfuls of a sour, greenish fluid. For this pounded ice was freely administered, and an occasional hypodermic injection of morphia. The only additional medication resorted to was small doses of cascara cordial as a cathartic and which had the desired effect without causing the least discomfort.

Case VI.—Mrs. S. B , age twenty-two, married. Admitted to University Hospital June 7, 1881, when the following remarkable history was obtained from her: Patient is a farmer's wife, and her home is at Farmers, Sanilac county, Michigan. Had always enjoyed good health until the birth of her only child two years ago, June, 1879. Her labor was somewhat prolonged but otherwise natural, and recovery at first was rapid. She suckled the babe for two weeks when she ceased doing so, on account of general anasarca, notwithstanding which she did a heavy washing during the third week. A severe cold followed and her dropsical condition became aggravated and her general health very poor. No improvement took place until December (six months after confinement), when great relief followed the operation of paracentesis abdominis, by which a large quantity of fluid was removed from the abdominal cavity. The operation had to be repeated in little more than a week; after which patient enjoyed good health for six months, that is, till June, 1880. She was then attacked by a severe pain in the left iliac region, and in a short time enlargement of the abdomen was detected, and had steadily increased to the present time.

On examination patient presented the general appearance of a *strong* and *healthy* woman at the seventh or eight month of pregnancy. Menstruation regular but very profuse and accompanied by bearing down pains. The abdominal tumor was irregularly lobulated, and deep fluctuation could be detected at one or two points. Over the greater part of the surface, however, the sensation was more that of a solid growth. The tumor was absolutely immovable. Per vaginam the uterus was fixed and low down, and the cervix appeared to swell right out into the tumor. Per rectum, several well defined, movable and seemingly solid tumors or lobules could be felt.

My opinion as expressed before my class was that the tumor was ovarian, although, certainly some points in its history and in the physical examination suggested the possibility of its being a fibrocystic tumor of the uterus. I explained my doubts to the patient and her husband, and proposed an exploratory operation. This was eagerly assented to, and on June 20, I proceeded to operate.

On cutting through the abdominal wall I found it impossible to separate the peritoneum from the front of the tumor. The most intimate adhesion had taken place between these two structures so that the only safe course was to cut right through into the tumor. It was at once determined that the growth was ovarian and I proceeded to attempt its removal. The usual plan of procedure of getting between the cyst wall and the peritoneum and affecting the isolation of the tumor, could not be followed in this case owing to the intimate and universal adhesion in front and on the lateral aspects as well. I first emptied one or two of the larger cysts by cutting into them, and then I proceeded to break down with my hand the myriads of cysts of which the growth consisted. In this way it was hoped that a point might be found where the line of demarcation between the tumor and the peritoneum could be seen, and from which the process of separation might be begun.

The process was a tedious one and somewhat bloody as well. Having broken down and scooped away a great deal of the tumor, I was at length fortunate enough to elevate the pelvic portion from its resting place and by going through the cyst wall at this point I was able to get behind the tumor, and at length succeeded in separating all its attachments to the abdominal wall and viscera. As the tumor was separated from its extensive connections very profuse hemorrhage took place from innumerable points, and a good deal of time was spent in arresting it and in sponging out the peritoneal cavity. Under the circumstances, I preferred to dispense with the clamp and cautery and to use the ligature thereby saving some time. The operation having been a long one (an hour and forty-five minutes), and agood deal of blood having been lost, I was apprehensive of my patient's strength giving away under the shock.

In such a case the glass drainage tube is in my opinion clearly indicated, and it was now inserted and the wound stitched up and the dressing applied as usual. During the latter steps of the operation the spray was dispensed with.

When the patient was removed from the amphitheatre the pulse at the wrist was imperceptible and she looked very much exhausted. Two hours later her pulse was 140 and her temperature 99. On examining the sponge which was applied over the mouth of the drainage tube, it was found saturated with arterial blood. A clean sponge was applied and was watched with great anxiety and frequently changed. The hemorrhage gradually diminished and about midnight ceased entirely. At that hour the temperature was 104, pulse 130, and the patient was hopeful and free from pain. After this all went well, the drainage tube was finally removed on the fifth day and the wound closed up. The temperature was very little above the normal after the third day, but the pulse continued unaccountably high, 140 to 160 and even higher until near the end of the second week, when it came down to about 100.

Patient was dismissed cured in one day less than three weeks from the date of her terrible operation and, when heard from last week was in robust health.

In this, as in all the other cases here recorded, very little medication was used. The bowels were opened for a day or two before operation by the administration of two drachms of cascara cordial morning and evening. After operation a few hypodermic injections of morphia and a few doses of quinine summed up this part of her treatment.

Dr. Keith's plan of giving neither food, drink nor medicine for twenty-four or forty-eight hours after operation I have found to work well in nearly every case.

Case VII.—Presents a very complete contrast to the preceding case; the one was a most perplexing and tedious case so far as the diagnosis and the operation were concerned, while the other which I am about to relate very briefly was free from nearly every element of doubt or difficulty.

Mrs. C. W., age twenty-one, of Bradley, Michigan, consulted me July 27, 1881, along with her medical attendant. Dr. L. F. Stuck, of Hopkins.

History: Patient first noticed enlargement of the abdomen five years ago, at which time it extended to the umbilicus. Up to that time her health had always been good. Menstruation commenced in her sixteenth year and has always been regular since. Appetite and digestion always good until quite recently. Sleeps well. Has never been tapped and has never had any pain in the tumor.

On examination a unilocular ovarian tumor was at once recognized, fluctuation very distinct and uniform in every direction. Per vaginam uterus normal. Tumor easily felt both in front of and behind the uterus and fluctation could be felt right through from one end of the tumor to the other. Circumference of body at umbilicus fifty-six inches; from ensiform to pubes twenty inches. Skin dark in color. No enlargment of the superficial veins.

On August 1, Mrs. W., arrived in Ann Arbor, and although the operation was not performed for two days after her arrival she departed on her return home on August 15, just two weeks from the day of her arrival.

On August 3, I operated in the usual manner. No adhesions were met with. The cyst was completely emptied by the trocar and canula, four gallons and one quart of fluid being withdrawn. The pedicle was thick and vascular, but was effectually treated by the clamp and cautery. The other ovary was observed to be cystic and was also removed. Very little sponging of the peritoneal cavity was necessary. The wound was closed as usual with deep silk sutures and several points of horse-hair superficially. The whole procedure was completed in less than half an hour and the patient was restored to bed. She soon awoke from the chloroform and on being asked if she felt any pain replied "no" and then added: "I just feel as if a whole family had moved out."

With the exception of four hypodermic injections of one quarter grain of morphia each, no medicine of any kind was given until the time came to move her bowels which was done by cascara cordial, and an enema on the fifth day. From the time of her operation until the day she left for her home she had only one complaint to make and that was all summed up in the word, *hunger*.

Case VIII.—In the latter part of August, 1881, while on a holiday visit to my old home, Kingston Ontario, I was asked by Dr. Phelan, to see Mrs. T. who was suffering from an ovarian tumor of great size.

We found the patient confined to bed and in surroundings of the most unsatisfactory description. She was extremely emaciated; her back was sore from lying on a rough straw bed;

her left inferior extremity was much swollen. The uterus completely prolapsed lay between her thighs on the bed, contact with which had induced an extensive ulcer of its inferior surface. The abdomen was enormously distended by an ovarian tumor. The size and weight of the latter were so great that the patient was unable to turn over in bed.

Notwithstanding all these facts the patient had a bright eye, a clean tongue, a good firm pulse, strong hope and an intense desire to be relieved of her tumor. Consequently I determined to give her case a careful investigation and all due consideration. The main points in the history of the case were as follows: Her age fifty-six. Married thirty-six years and has nine children, the youngest being thirteen. Menopause occured shortly after birth of last child. Has always been healthy and has worked very hard. Abdominal enlargement first noticed just one year ago but was attributed to dropsy. Dr. Phelan made an examination shortly afterwards and discovered an ovarian tumor about as large as the fœtal head. Six months ago patient had a violent attack of peritonitis from which she recovered to some extent but has suffered more or less pain constantly since then. For this pain morphia has been used frequently. The tumor has grown steadily and rapidly from the first, and for the last four months patient has been almost entirely confined to bed. Prolapsus uteri occurred in June and since then the right leg has been much swollen and very painful.

On examining the tumor through the abdominal wall (the only direction in which it could be approached at all) several large clearly fluctuating cysts were detected, but over a considerable portion of the surface the tumor gave evidences of being solid. Adhesions, both abdominal and pelvic, were suspected, partly from the history of peritonitis, partly from the multilocular nature of the tumor and its large size, partly also from the swollen condition of the lower extremity, which, as a rule, indicates pelvic adhesions of a serious character.

Although this case was undoubtedly a very doubtful one, it nevertheless seemed to me to be one that was entitled to the chance of an operation, especially as the patient herself was so exceedingly desirous of having the one remaining chance afforded her. The family being in poor circumstances I agreed to undertake the case gratuitously, provided proper arrangements were made to place her in proper surroundings and provide her with satisfactory nurses. When the hour set for the operation arrived I was greatly disappointed to find that the promises which had been made to me in these important matters had not been fulfilled, and I was still more disappointed afterwards to find that they never were fulfilled in any particular. Her surroundings and nursing were such as to deprive her of any chance which she might otherwise have had.

On September 13, I operated in presence of and assisted by Drs. Stewart, Sullivan, Saunders, K. Fenwick, Alexander Kennedy, and Phelan. The only difficulty encountered was the enormous size of the tumor and its intensely multilocular structure which rendered it a tedious and somewhat bloody matter to reduce the mass sufficiently to admit of its extraction through even a good long incision. Strange to say no adhesions of any kind existed. The pedicle was large and very vascular, but was treated satisfactorily in the usual way, that is with the clamp and cautery. All antiseptic precautions were used. The glass drainage tube was inserted. The operation lasted nearly an hour. Patient suffered comparatively little shock and not much pain. One eighth of a grain of morphia was injected hypodermically two or three times in the first twenty-four hours and sufficed to keep her easy.

For several days after the operation, patient felt and looked well. A good deal of reddish serum passed away through the drainage tube, and the peritoneal cavity was washed out through the tube with great relief to the patient. Her pulse hardly ever rose above 100 and her temperature never exceeded 99½. She was able to take liquid nourishment very well, and had it not been for serious neglect and mismanagement for which I was in no way responsible, I am satisfied she would have got well. As it was she lost her appetite, her bowels became tympanitic (the first time I have had occasion to mention this symptom in this paper), her bladder was allowed to become over distended and paralyzed so that it was impossible to keep her dry and she finally sank and died on the 23d of September, just ten days after her operation. During the latter days vomiting had been a prominent symptom, but this was due to the tympanitis and the low form of peritonitis from which the patient suffered, and was not in any way attributable to the anæsthetic.

It will be noted that vomiting has not been mentioned as a prominent symptom in connection with any of the cases hitherto recorded in this paper, and chloroform was the anæsthetic used in each one of them.

I should perhaps mention the fact that the tumor weighed upwards of eighty pounds.

Case IX.—In September last I was called to Rome, New York, to see Miss J. S., on account of an ovarian tumor which was a source of much distress to her.

History: Age twenty-three. Has always been delicate. Menstruated first at the age of thirteen. Has never been very regular in this respect. Has been a school teacher for some years, but has frequently been compelled to abandon her vocation on account of feeble health. During the summer of 1878, she first noticed some enlargement of the abdomen. The enlargement increased very gradually. In 1880 she suffered from painful micturition. On February 10, 1880, she had an attack of intense pain in the left side. This lasted several days and left her nearly exhausted. May 8, 1880, another similar attack of pain, and on July 19, another and much more severe one occurred. Drs. Sutton and Landreau, of Rome, diagnosed peritonitis from the irritation of an ovarian tumor, and besides administering opiates freely they tapped the cyst and drew off about five quarts of a thick red fluid. Recovery slowly followed their treatment although for some days her pulse was 140 and her temperature 104, with incessant vomiting and great prostration. The cyst gradually refilled and early in September she began to suffer from cardiac irritability, loss of appetite, emaciation and abdominal distress.

On September 19, I saw her for the first time and made a careful examination. Patient looked pale, thin and anxious, her pulse was rapid and small, but her temperature was normal. The abdominal enlargement was comparatively insignificant. She looked like a woman at about the fourth month of pregnancy, the tumor had barely ascended to the umbilicus, and my first impression was that the time had not yet arrived for ovariotomy. On further investigation, however, I took a very different view of the case. Patient, who is an unusually intelligent and clear headed young lady, informed me that her tumor was causing her great distress and that it was getting worse every day, that instead of enlarging it seemed to be growing more and more tense and that she felt that unless something were done at once, her strength would be exhausted. Fluctuation in the tumor seemed very obscure and I expected to find a small and adherent multilocular tumor.

I determined to operate and did so next day with the assistance of Drs. Sutton, Landreau, Evans and Palmer of Rome, and Sullivan and Kennedy of Kingston. Chloroform was administered as in all the other cases with the dropper and inhaler and about two drachms used in this case altogether. The cyst was unilocular and was filled with a thick sanguinous fluid which was discharged with great force through the canula. The cyst wall was more than an inch in thickness (looking a good deal like a uterus) and lined with warty excressences. The fluid measured five pints. A fold of intestine was adherent to the upper part of the cyst in front, and the latter was adherent to the abdominal wall in every direction. Still the adhesions were easily disposed of. The pedicle was very short and small, and it was infiltrated throughout its entire extent with broken down clots of blood, so that as I lifted the cyst out of the abdominal cavity the pedicle broke or tore off close to the fundus of the uterus. The abdominal walls having never been distended to any extent were tense and unyielding, the intestines floated up through the wound rather persistently while blood welled up from the pedicle which for a short time had slipped away out of sight.

This part of the operation was by no means free from difficulty and embarrassment. I soon succeeded, however, in getting hold of the little tag of a pedicle and after applying the clamp and cautery to it, I determined to make assurance doubly sure and therefore transfixed and tied it with a fine silk ligature, the ends of which I cut off close to the knot, every drop of fluid was sponged out of the peritoneal cavity, and as all oozing had ceased I thought that the drainage tube might safely be omitted, and the wound was closed in the usual manner with silk and horse-hair, and the patient placed in bed.

In this case the spray was dispensed with, although the sponges and all the appliances had been carefully prepared with carbolic acid. When the effect of the anæsthetic passed off, patient complained of severe pain and therefore a hypodermic injection of one-quarter grain of morphia was administered, although I should have preferred to have dispensed even with that, as well as with anything in the way of food or drink until flatus had passed from the bowels. Until the morning of the third day after operation, patient complained of nausea, and she occasionally vomited a mouthful or two of greenish matter. During this time she also complained occasionally of pain for which morphia was used hypodermically. On the morning of the third day the nausea disappeared and in the evening of that day she complained so much of hunger that milk was given her with ice, although flatus did not pass until the afternoon of the fourth day. The silk sutures were removed on the fifth day, the horse-hair sutures on the twelfth day without causing serious discomfort. The bowels were moved first by an enema on the eleventh day.

A very elaborate record of the progress of this case is in my possession but it is impossible to give it here, although it contains much that is interesting and instructive. Some slight febrile symptoms prevailed for two or three weeks, exciting a suspicion of blood poisoning. During this time she was under the care of Dr. Sutton. No very dangerous symptoms appeared, she took morphia hypodermically for just fifty days and then stopped it entirely. When last heard from, some days ago, she was feeling better than she had done for a long time.

Case X.—Mrs. A. aged fifty, of Jackson, Michigan. Has had five children, the youngest being nineteen. Health has always been good and is so now. Menstruation has been irregular for the last five years. Has not menstruated at all since January. Kidneys and bowels perform their functions normally. No swelling of legs and feet. Appetite good and sleeps well. First observed tumor about one year ago. It was then low down and apparently on the right side. Circumference of abdomen at umbilicus forty-four inches. Measurement from ensiform to pubis eighteen inches. Per vaginam the uterus was found to be normal and the tumor can barely be reached in front of the uterus. Fluctuation is very distinct over a large portion of the tumor, but a considerable area of solid structure can be felt as well.

October 6, 1881, ovariotomy was performed. One large cyst was easily evacuated, but a large portion of the tumor was found to be multiloculor. No difficulty was met with during the operation, and no unfavorable symptom of any kind occurred afterwards. The patient literally had neither pains nor aches, and no medicine was given except a few doses of quinine, owing to a suspicion of ague. She was practically dismissed cured in two weeks, and she returned to her home in excellent health and spirits inside of three weeks from the date of operation.

ALUM IN BREAD.

BY SAMUEL H. GUNDER, PH. C., FAIRMOUNT, ILLINOIS

This subject is an important one from a sanitary point of view, and last spring, while a student in the pharmacy department of Michigan University, I undertook some investigations with the object of determining how far this adulteration is used. The average amount of alum normally present in pure bread, as determined by the analyses of others and confirmed by my own, is 4.41 grains to a two pound loaf. When a much larger amount is present it may be regarded as an adulteration. Mr. Horsely, an English chemist, has proposed a very simple test for alum as an adulteration in bread and flour. His test is known as the "Logwood test," and is best applied as follows: "One hundred and twenty grams of chips of logwood are digested in eight ounces of methylated spirits for eighteen hours and then filtered. This solution, when brought into contact with bread or flour free from alum, produces a pale yellow or straw color, but a dark red when alum is present."*

The process. which I used for determining the amount of alum is as follows: One hundred grams of bread crumb is carefully incinerated in a platinum dish; the ash fused with three times its weight of pure potassium and sodium carbonates; the fused mass, dissolved in a hydrochloric acid, evaporated to dryness, the residue dissolved in an acid, diluted and the silicon removed by filtration; to the filtrate ammonium hydrate is added until a permanent precipitate is formed. This precipitate is dissolved in a little hydrochloric acid, a slight excess of ammonium hydrate added and the mixture set aside over night. The precipitate which forms is collected, washed and redissolved in hydrochloric acid. The solution is boiled for a few minutes with a small quantity sodium bisulphite; then an excess of sodium hydrate added, and the boiling continued a few minutes longer. The precipitate formed is chiefly the oxide of iron and is removed by filtration. The filtrate is rendered feebly acid with hydrochloric acid, acetate of ammonia added in excess and allowed to stand over night. The precipitate consists of pure phosphate of aluminum and is collected, washed, dried and weighed This weight multiplied by 542 gives, the number of grains of potash alum in two pounds of the bread.[*]

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* *Chemical News*, Volume XXIV, page 134.

Seventeen samples of bread were examined. Eight of these gave evidence of alum with the logwood test. The samples from large city bakeries contained the most alum. The following figures give the amounts of alum in grains per two pounds of bread in the specimens which responded to the logwood test:

Number 1	16.85 grains.
Number 2	15.82 grains.
Number 3	14.31 grains.
Number 4	12.30 grains.
Number 5	11.22 grains.
Number 6	10.56 grains.
Number 7	10.24 grains.
Number 8	9.10 grains.

Three samples which gave negative results with the logwood test contained the following amounts:

Number 1	4.76 grains.
Number 2	4.63 grains.
Number 3	3.84 grains.

All the "patent" flours examined contained alum.

EXTRACTS OF MALT.

BY ALBERT B. PRESCOTT, M. D.,
Professor of Organic and Applied Chemistry and Pharmacy in University of Michigan.

For a physiological valuation of the extracts of malt of the present day, we must inquire (1) what is the comparative value of malted grain, and (2) to what extent are the constituents of malted grain obtained and preserved in the manufactured extracts? We have to ask, not only of digestible food substances, their quality and quantity, but of agents to carry on digestion, their presence and power.

Malt as a whole has never been generally adopted as a food. It has been proposed as an addition to grain for the feeding of animals, and Mr. Lawes, a life-long worker in the chemistry of the cereals, instituted a series of experiments, finding that by feeding a given quantity of unmalted grain, more increase of weight of animals would result than could be obtained by feeding the equivalent but smaller quantity of malt. Ground barley malt has been used by man as a special food, in scurvy, and in some forms of indigestion, and it has been introduced into some of the proprietary farinaceous foods for children and invalids. When used by physicians, however, a hot infusion or a decoction has more often been directed, so that only the soluble part of the malt has been taken. And now, for ten to fifteen years past, numerous extracts of the soluble portion of malt have been extensively made and carried into use over the world.

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[*] *Chemical News*, Volume XXV, page 232.

In malting, grain only loses about one tenth of its weight, beside a loss of water in the final drying. With a limited extent of oxidation, which causes this small loss of solids, there occurs an extensive saccharous transformation of the starch, and no small modification of the albuminoids. Lawes reported as follows:

	IN BARLEY.	IN MALT.
Sugar	2.56	11.01
Starch, Dextrine, and Fat	80.42	72.03
Albuminoids	9.83	9.95
Fiber (celulose)	4.69	4.84
Ash	2.50	2.17
Water	17.64	6.66

Of both sugar and dextrine there is in malting an average increase of over twenty per cent., with a nearly equivalent diminution of the starch. The albuminoids are diminished a little in absolute quantity, and changed very much in character. O. Sullivan states that malt yields at the most only about thirty per cent. to cold water. It is commonly stated that it should yield, by hot digestion, about two thirds its weight. Hager says that one hundred parts of malt should give seventy to eighty parts of syrupy extract, which would contain from fifty-two to sixty parts of solids. In May and June, 1880, an analysis of four of the extracts of malt in use was made,* under my observation, with the following percentages of the two chief non-nitrogenous constituents, and the ash:

	NUMBER 1.	NUMBER 2.	NUMBER 3.	NUMBER 4.
Malt Sugar	46.53	30.49	16.87	38.47
Dextrine	11.49	4.67	4.81	10.87
Ash	1.67	1.34	1.89	1.68

Number 3 was a fluid preparation, the other three were syrupy. Dunstan and Dimmock, in analysis of extracts of malt current in England in 1879, found (as extreme limits among five samples) from forty-one to fifty-three per cent. of maltose, from five to nine per cent. of dextrine, from four to six per cent of albuminoids, from 1.1 per cent. to 1.6 per cent. of ash, and from twenty to thirty-two per cent. of water.

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* By R. S. McCulloch, Ph. C.

This sugar, formed from starch at the seat of germination, was for a long time accepted as identical with the sugar from starch by boiling with mineral acids, but the research of O. Sullivan in 1872, established decided differences. Maltose (malt sugar) is more nearly allied to cane sugar than it is to glucose. Beside distinct optical powers, maltose possesses only sixty-five per cent. as much deoxidizing power with Fehling's solution as glucose. Starch is converted not wholly into sugar, but into variable proportions of malt sugar and dextrine, as co-ordinate products, the dextrine being mostly and under ordinary conditions wholly a final product of the saccharous fermentation, though capable of being changed into glucose.

Now it remains to be established whether or not there are any important differences, in the point of physiological adaptation as foods between (1) the sugar of our own starch-digestion, (2) the sugar of malt, and (3) the sugar of starch conversion by mineral acids. From the analogy between the action of the pancreatic ferments and the diastase ferments, we must look with favor upon the product of the latter as an article of food, and therefore choose food-sugar from malt extract, rather than from the glucose factory, aside from the serious question of contamination at the last named source. As for dextrine, and the soluble forms of starch found with it in malt, the presumption is certainly in favor of their being easily digested, and more gradually and equably absorbed than ordinary dietetic sugars. The mineral portion of malt, so far as soluble in water, chiefly potassium phosphate and chloride, is of undoubted service to the system, and an element of value in malt extracts.

Albuminoid material constitutes an average of nearly ten per cent. of malted barley. In the best syrupy extracts of malt of the market, Dunstan and Dimmock found as much as five per cent. (4.0 to 6.1 per cent., five specimens) of albuminoids. Taking these figures, it appears that thirty-five to forty per cent. of the albuminoids in malt dissolve in water to such a permanently soluble form as to be obtained in the extract. At all events, it is a part of the alteration which gluten and other nitrogenous matters of grain undergo in malting, that they become in greater part soluble in water. Now we have in common life two hints toward the effect of malting upon the food value of albuminoids. The sprouted grain of a bad harvest is in effect imperfectly malted, its gluten suffers in vesiculating power, and it suffers in value. Again the panary fermentation of bread making begins with a saccharous change of the starch, nearly the same as that of germination, and bread is vesiculated by this means without general objection. Really we have no reason to doubt that soluble albuminoids of malt possess a good degree of dietetic value, though full assurance in the matter can only come from sufficient physiological tests.

So far we have only considered the constituents of malt extract as materials for digestion. As such they merit favorable esteem. Malt syrup, well-made, has decided dietetic advantages over cane sugar syrups, as well as over a pure syrup of starch sugar (when it shall be obtained). Malt syrup furnishes a superior variety of sugar, with the wholesome addition of dextrine, and with smaller but still important portions of albuminoid material, and of potassium phosphate,—all in a product little liable to contamination. To be sure this can never be a cheap syrup, but if its manufacture were undertaken with the object of making a food for general use, adopting efficient methods to dissolve quickly and concentrate rapidly the soluble food parts of malt, without regard to the preservation of diastase, the article could be furnished at rates within the means of the body of the people.

But malt extract is more prominently before the medical world as containing an agent itself capable of digesting starch. In the condition of health, the ingestion of a digestive agent can hardly be desired. It is doubtless better for the glands to be under demand to furnish the due quota of the digestive agents,—as it is better that we shall take food requiring digestion, and use more starch than sugar. The substance usually termed diastase has not been separated in the pure state. In a crude form it is obtained by fractional precipitation with alcohol. Dubrunfaut found that it was decomposed and its potency diminished by the alcohol, and applied the name maltin to the unchanged ferment, from which diastase was formed by alcohol. But the essential facts seem to be these, that at the very inception of the germinating process of seeds in general, portions of albuminoid substance undergo changes whereby they act as ferments and cause the saccharization of the starch in contact with them. Now to what extent can we and do we obtain an active agent of starch digestion in extracts of malt?

Analysis for quantity of diastase by its precipitation is worse than useless, it is fallacious. Like other ferments, diastase can be estimated only by its effects. As detailed by Messrs. Dunstan and Dimmock,* the solution supposed to contain diastase is added in given quantity, to weighed portions of starch, previously gelatinized, digestion is carried on for about three hours, at animal temperature, and each portion then tested for unconverted starch, by adding iodine solution. Working by this method, Mr. McCulloch found the following values of diastase, in the four extracts of malt before mentioned:

Of Number 1, 0.8 were required to convert 1.0 gram of starch.
Number 2, 3.0 were required to convert 1.0 gram of starch.
Number 3 had no starch-converting power.

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* *Pharmaceutical Journal, Transactions*, London, 1879, [III] IX, 733.

Of Number 4. 23.0 grams were taken to change 1.0 gram of starch. Dunstan and Dimmock found only three out of fourteen samples of extract of malt to have any effect on starch, and of these three, there were required 17, 29 and 34 grams, respectively, to change one gram of starch.

It is currently stated that in a temperature above about 68° centigrade (155° Fahrenheit), diastase in solution is rendered inert. To ascertain more definitely what various conditions cause this result, a series of experiments were instituted* in the laboratory in which the writer is engaged. Aqueous solutions of malt were made and concentrated under numerous conditions, and the products were estimated for starch converting power. The results affirmed that barley malt loses its power of saccharizing starch as follows: (1) By continued heat in solution, above 65° centigrade (149° Fahrenheit), and by continued heat of the dry malt if much above this temperature. (2) By alcoholic fermentation even if very slight in extent. (3) By action of free mineral acids.

Extract of malt is officinal in the German pharmacopœia, and will be under the next revision of the pharmacopœia of the United States. The process of the former authority is defective in that it provides boiling to clarify. Whatever albuminous matter will not separate at 65° centigrade (149° Fahrenheit), may be retained without injury. Hager, in his "Pharmaceutisch Praxis," directs to macerate one thousand grams ground malt with an equal weight of cold water, at 10° to 15° centigrade (50° to 59° Fahrenheit), for six or eight hours. Then add four liters (four thousand grams) of water of 30° centigrade (86° Fahrenheit), and digest at 60° to 70° centigrade (140° to 158° Fahrenheit) for one hour. Filter, add the whites of two eggs, boil, strain, and concentrate quickly, in a vacuum apparatus, or by stirring on a water bath. In this process the boiling is very objectionable. It is better that the maceration should be mostly at a temperature either above or below that of fermentation. The temperature of about 54° centigrade (129° Fahrenheit) is favorable for the latter maceration, and for the concentration. Clarification, if desired with use of egg white, can be done at 65° centigrade (149° Fahrenheit). In evaporation, a vacuum apparatus should be employed (at 54° centigrade), but it can be done in an open dish by means of constant stirring. There is little action of the diastase upon the unchanged starch, in maceration, as raw starch is not saccharized by diastase. Among other special preparations of malt, there is an extract made dry by addition of sugar of milk. The malts of various grains may be employed when the object is to obtain a food. For the fullest proportion of diastase, as a digestive agent, the malt of barley is preferable.

As a test of value and purity, take one part dry starch, gelatinize it, cool and add fifty to one hundred parts of the extract, and digest at a little above animal temperature for two or three hours, when the addition of a drop or two of compound solution of iodine should give no blue color. If the test can be extended to furnish a full estimation of digestive power, so much the better, but it is well to find the mere presence of diastase, as an evidence that fermentation has been avoided, and the food constituents are uninjured.

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*By C. W. Parsons, Ph. C.

Extracts of malt should respond to tests for the dextrine and soluble albuminoids of malt. These responses will be faint in proportion to adulteration with glucose or other syrups. Alcohol should cause a decided turbidity, resolving into a flocculent precipitate. If ten cubic centimetres (two and one-half fluid drachms) be treated, in a test-tube, five-eighths inch wide, with an equal volume of a cold-saturated aqueous solution of picric acid, a decided turbidity should appear, becoming in ten minutes quite opaque. Diluted malt extract should give precipitates with most of the general reagents for alkaloids, including tannic acid.

A CASE OF EMPYÆMIA.

BY CHARLES E. KOON, M. D., CASNOVIA, MICHIGAN.

Walter Brown, age thirteen months, was taken ill in February last, with what appeared to be the prevailing distemper or influenza, and was treated several days by a worthy young alumnus of Ann Arbor.

When convalescence was seemingly well established he was suddenly seized with a violent convulsion, followed by right hemiplegia, on account of which I was asked to see the case in consultation. At the request of the doctor and with the assent of the family I reluctantly took charge of the case. Put the little patient on expectant treatment, gave a gloomy prognosis and promised to call next day.

At the next visit my attention was attracted by his hurried shallow respiration and on examining the chest was surprised to find complete dullness, with bronchial blowing, and all the usual signs of pleuritic effusion. The heart was greatly displaced to the right and could be heard and *seen*, ticking rapidly through the thin chest walls, under the right nipple.

The introduction of an exploring needle being objected to, my only recourse was medication, and patiently waiting results. Diuretics, counter irritation, etc., was persevered in faithfully for three weeks, and while the general condition of the patient was somewhat bettered, the thoracic symptoms remained much the same. Finally his temperature—which had hitherto been about normal—became elevated, profuse sweating, and other unfavorable symptoms supervening—an exploratory puncture was made and a quantity of pus obtained. The following day, assisted by doctor Bion Whelan, ether was administered and an ordinary trocar introduced, when there flowed from the canula thirty ounces of pus. A large quantity of warm water was pumped—by means of a Davidson syringe—into the pleural cavity and allowed to run out through the tube. A saturated solution of chlorate of potash was injected as a final washing. The tube was withdrawn, the puncture sealed with adhesive plaster, and he was permitted to "come too," when with a frown at the doctors, he was taken by the mother and immediately took the breast. One week later there was a spontaneous opening into the bronchus, and an escape for a few days of a small quantity of fetid pus, and nefarious gas, after which his progress towards recovery was uninterrupted and rapid. The collapsed lung again resumed its proper office. The heart slowly returned to its normal position, and better still, with returning health the symptoms of paralysis gradually disappeared, and to-day, nine months from date of attack, our little hero presents a fine picture of robust health, a rare specimen of infantile tenacity.

A DISTRESSING CASE DUE TO LACERATED PERINEUM.

BY B. A. OWENS, M. D., PORTLAND, OREGON.

Mrs. B., age forty-seven, married, mother of six children, youngest seven years old, consulted me August 2. Complained at times during the last fifteen years. Had great weakness and distress in the back. Experienced much difficulty in voiding urine. During severe attacks was compelled to take her bed. She was much distressed about a "tumor" which became very prominent during her bad spells. She was despondent and suffered much from headaches. She knew that she should never live to pass through the change of life, as two of her sisters had died at that time. Had never been examined but had been treated for her liver for years. "Nothing less than ten grains of calomel would have any effect on her liver." This is the patient's own history. Upon examination, a glance sufficed to reveal the primary cause of this lady's great sufferings, which consisted in a severe laceration of her perineum, which extended to the very margin of the sphincter ani. The cervix of the prolapsed uterus lay just within the labia, while a large cystocele, "the tumor," protruded beyond and pressed upon a fully developed rectocele. The catheter showed stricture of urethra. Uterine sound, showed enlargement of uterus to the extent of two and one-half inches, also the organ was very sensitive. Cervix was large, hard and indurated. I immediately began with the iodine and hot water treatment. Replaced the uterus each day and held it in place by means of a cotton pad soaked well with glycerine and annointed well with vaseline. Emptied the bladder and washed it out each day with a solution of bismuth cream. Treated the stricture by dilatation. Applied dry cups to the full extent of the spine and across the sacrum, every alternate day followed with iodine liniment. Ordered an alcohol vapor bath twice a week. I will add that patient looked forward with pleasure to the application of the cups. She declared that while they were on and for some time afterwards her head and back were free from pain. Under this treatment with the aid of Professor Palmer's laxative pills she rapidly improved, and at the expiration of five weeks, the uterus having returned to its normal size and every thing favorable, I pronounced her ready for operation, to which she consented.

Assisted by Professor Carpenter, Dr. Cardwell and Mrs. Dr. Parrish, I proceeded to operate. Dr. Cardwell administered the anæsthetic. He first brought her under the influence with ether, and then held her with chloroform. I proceeded to work by first pushing a large sponge up the vagina to render the parts more tense, while Professor Carpenter held the bladder out of my way with Sim's speculum; I now marked out my work by nicking at either side, and at the mesial line of the recto vaginal wall at those points to which I wished to denude the membrane. With the two fingers of the left hand in the rectum, I now removed the mucous membrane in one entire piece by means of a pair of probe pointed ophthalmic scissors. These delicate little scissors seemed to be just the instrument for this delicate work, and though I never saw them used in the perineal operation, I shall certainly adopt them in the future for such work. The hemorrhage proved very annoying and after trying to check it with ice and hot water for some time, I saturated a sponge in spirits of turpentine and applied to the bleeding surface. This did, as Professor Maclean has so often said it would do, "acted like a charm." I now introduced six silver sutures, and removing the sponge from the vagina, I brought the parts together, twisted the wires and covered them with rubber tubing. Evacuated the bladder, tied the limbs together, cleansed the parts and had her placed in bed. She immediately came from under the influence of the anæsthetic without feeling in the least nauseated. From the beginning of the anæsthesia to the completion of the operation, occupied an hour and a half owing to the troublesome hemorrhage. I kept the bowels lax by means of cascara cordial and enemata which were alternated. This treatment secured one free evacuation each day. Diet during the first eight days consisted of fluids only, soups and broths, on the ninth and tenth days she was allowed in addition poached eggs and buttered toast. The vagina and parts were thoroughly cleansed twice daily. On the tenth day I removed the sutures without a drop of blood following their removal. The inflammation had entirely subsided. Indeed, there seemed but little adhesive inflammation throughout the process of healing, and but a minimum of pus, and I acknowledged that I had some misgivings that there was not sufficient inflammatory action of the parts to secure a perfect union of so large a surface. But, my fears were all dispelled upon the removal of the sutures, for with one finger in the rectum and one in the vagina, I found perfect union throughout the entire wound which secured a thick, firm, perinæum of over two inches in length. During her ten days in bed she had no sign of fever, at no time had she a rise of temperature or pulse, She slept well every night without an opiate of any kind. On the fifteenth day after her operation she returned to her home by rail, a distance of two hundred miles. And she is now doing that which she has not done for years—her house work. She is well and is happy.

EDITORIAL BRIEFS.

PROFESSOR SIM of Memphis, reports a case, in which one grain of iodoform three times per day, caused the expulsion of several feet of a tape-worm. He recommends this remedy for the diagnosis of tape-worm, when oil of male fern should then be given. He also advises the use of suppositories containing seven grains each of iodoform for ascarides and other intestinal worms.

DR. J. C. OLIVER, one of the most prominent physicians of north Missouri, died suddenly in Huntsville, in November. He had visited a patient, prescribed, and arisen to depart, when he complained of severe headache, asked to lie down upon a lounge, and in a few minutes was dead from apoplexy. As a diagnostician he was quick and keen of sight, as an operator he was bold and expert, and as a man he was beloved by all.

WE hope that with the close of the year all our subscribers will send in their subscriptions. Prompt payment will enable us to improve the journal, and the reader will receive the reward. It is our ambition to edit a journal whose contents will be of permanent value, and for such a purpose money is necessary. We have no desire to be connected with a medical newspaper, filled with cheap jokes and sensational stories, nor with one whose pages are filled with mere clippings from other journals; but men who constantly make translations and abstracts must be paid for their time.

WITHIN the past twelve months several eminent men, who have at some time been connected with the Michigan University, have died. Watson, Haven, Williams, Greene and Tappan have all fallen within twelve months. Only one of these, Dr. Greene, was a medical man, but the others were all earnest advocates of thorough medical education, and did much for the profession in that direction. We have already had occasion to refer to some of the vigorous words spoken by Dr. Haven in defense of scientific medicine and against charlatanism. Dr. Tappan was no less earnest in behalf of scientific medicine. It was under his administration, and largely through his efforts, that the department of medicine and surgery was established, and maintained during its infancy. He also took great interest in the equipment of the chemical and anatomical laboratories, those workhouses of science for which the University has become so well known. Many of our older readers will remember the commanding form, noble intellect and open heart of the father of Michigan University. As a philosopher and educator, our country has produced but few who were his equals.

WE are at liberty more formally to announce that a work on the Science and Practice of Medicine, long anticipated by those who have listened to the teaching of our confrere, Professor Palmer, is in press, and as soon as it can be made ready, will be issued by G. P. Putnam's Sons, of New York, in their best style. This work is the outcome of more than forty years of study, observation and experience, in a variety of situations. Commencing as a village and country private family practitioner, and becoming familiar with the aspects of disease, as occurring in a rural population, he has since extended his observation very widely, not only in this country, but abroad, and for some years past in special preparation for this work. The work, however, is undoubtedly written from the standpoint of an American physician, and must be better adapted to the wants of the general American practitioner, than those from foreign, city, consulting and hospital physicians, who see diseases in such different classes of persons from our general population, and very seldom in their early stages.

Those who have listened to Professor Palmer's lectures, will expect a work well up to the present state of knowledge in pathology and therapeutics, containing independent opinions on practical points and abounding in discriminating advice respecting the management of the sick.

We have had the opportunity of examining some of the advanced sheets, and we have no doubt that all reasonable anticipations respecting it will be realized. The type is clear and distinct and not so small as to be uncomfortable to the eyes, and we understand such arrangements are made that the work will be furnished at a price, which considering its extent and character, will be very satisfactory to the purchasers. We bespeak for it a favorable reception.

MEDICAL NEWS.

A Mr. McArthur, said to be the oldest man in Scotland, recently died in his one hundred and fifth year. His faculties remained unclouded to the last.

The *Medical News and Abstract*, one of the most highly prized of our exchanges, is with the beginning of the next year to appear as a weekly instead of a monthly. The subscription price will be five dollars.

The physicians of Germany and Great Britain are raising subscriptions in order to present Professor Virchow with a proper testimonial on the anniversary of the twenty-fifth year of his professorship at Berlin.

Dr. Atkinson states that the application of cotton moistened with a one per cent. solution of nitro-glycerine to a decayed tooth will relieve the ache. After the application of the nitro-glycerine, laudanum may be used to prevent return of the pain.—*Practitioner.*

Dr. Amat advises sea-bathing in various indolent inflammatory diseases of the eye. The improvement is due (1) to the general tonic effect, and (2) to the slight irritation of sea-air, which is of great benefit in torpid inflammations but productive of harm in active inflammations.—*Archives Génerales de Medicine.*

Dr. Curtis has successfully used a strong decoction of black walnut (Juglans Nigra) leaves in a recent epidemic of diphtheria. It may be used as a gargle or with a spray apparatus. In the worst cases the strength of the decoction is increased by using the shells of green walnuts.—*Boston Medical and Surgical Journal.*

Several physicians have lately reported, in the various medical journals of Great Britain, cases of albuminuria in very young children who were suffering from eczema. It is also stated that in a considerable proportion of cases of eczema of the external genitals in both sexes, suppression of urine, convulsions and death occur.

Thapsia is a new remedy which seems to have found great favor in France. It is obtained from a plant growing in Algeria. It is a rubefacient producing, when locally applied, an abundant miliary eruption. In this respect, it acts more rapidly and certainly than croton oil. It is of service whenever counter-irritation is needed.

Dr. Saundby uses caffeine in doses of one, two, or three grains in pill three times a day for the vertigo accompanying Bright's disease.—*British Medical Journal.*

The *Lancet* complains that deaths from chloral have become quite common in Great Britain. The one taking it soon comes to use it quite recklessly, and on account of inability to sleep some night he takes an overdose and is found dead the next morning. More caution should be used in our own country in prescribing this drug.

The *British Medical Journal* mentions the case of a fertile African female mule, now kept in the Jardin d'Acclimation, Paris. She has produced offspring, five in number, three sired by a horse and two by an ass. There is an old Arabian proverb that "When the mule produces offspring, women will become men and men will become women."

Dr. Alfred McClintock, the well known Dublin authority on diseases of women, is dead. Dr. Foulis, known as a prominent laryngologist, died of diphtheria contracted from a patient, at his home in Glasgow, Scotland, October 31. Professor Bouillaud, an authority on diseases of the heart, and the discoverer of the relationship between diseases of the heart and rheumatism, recently died in Paris.

Mr. Barwell, of Charing Cross Hospital, has again performed the operation of nephrectomy, making his second operation and the thirtieth on record. Mr. B.'s case was one of nephrolithiasis, and recovery was speedy and complete. Of the thirty cases on record, one-half terminated fatally. A very full description of the methods of performing nephrectomy appeared in the February and March numbers of this journal.

Dr. Barnes holds that ophthalmia neonatorum is not always due to contact with the secretions of the maternal passages during birth. He mentions a case of his own in which the child was born in the unbroken membranes and ophthalmia appeared. He also refers to a case reported by Veit in which the disease appeared in a child which had been delivered by Cæsarean section. Dr. Barnes thinks that the use of dirty sponges, contaminated diapers, towels, etc., may often cause the disease.—*British Medical Journal.*

Mr. P. Gould presented to the London Pathological Society a drawing of a brain in which the cerebellum consisted of the left hemisphere only. The deformity was recognized in the dissecting room. The man had died at the age of eighty, and had been gardener at a work-house infirmary for sixty years.

He was a quiet man, always rational, and without any evidence of nerve lesion during life. There was but a shallow fossa in the occipital bone on the right side, showing that the deformity was congenital. The cerebrum and spinal cord were normal, though the former was somewhat broken down from postmortem changes and could not be studied as thoroughly as desired.—*British Medical Journal.*

Dr. Tilt recommends bromide of potassium for the weariness produced by traveling. From twenty to thirty grains may be taken at night. Powders may be easily carried and taken on two or three successive days at intervals of a week.—*British Medical Journal.*

Dr. Becker uses the tannate of quinine in whooping cough. It is best given in a little syrup, and the dose should be one decigram for each year of the child's age. Dr. B., supposes that the quinine destroys the poison. The salt may be prepared by precipitating quinia with tannate of ammonia.—*London Medical Record.*

Dr. Sattler recommends the following antiseptic collyrium with which compresses may be moistened in cases of ulcer of the cornea:

℞.	Acidi salicylici	1	00
	Acidi boracici	3	00
	Aquæ destillatæ	100	00

M.

—*Le Progrés Médicale.*

Dr. Cheron Recommends the following as an injection in purulent endometritis:

℞.	Acidi tannici	10	00
	Tincturæ opii	10	00
	Glycerini	350	00

M.

Dissolve the tannic acid in the glycerine without heat, then strain and add the laudanum. Add from one to two dessertspoonfuls to a litre of warm water when used as an injection.—*Le Progrès Médicale.*

Occasionally some physician reports a temperature of 110° or higher. Dr. S. Mackenzie reports a case (*Medical Times and Gazette*) in which the temperature as indicated by the thermometer, when the patient was not closely watched, ran up as high as 130°; but when the thermometer was held in place by the physician, the temperature was normal. It was some time before the method used by the patient to run up the mercury could be ascertained. She finally acknowledged that by certain dexterous movements she would bring the bulb of the thermometer in contact with hot bottles, etc., placed in the bed. Probably other cases of excessively high temperature reported at different times have been due to like causes.

For epididymitis gonorrhoica, Unna applies for the first twenty-four hours an ice-cold lead lotion, and then a muslin lead plaster is applied and the patient allowed to go about. The lead ointment, which is spread upon the muslin is made as follows:

R.	Emplast. plumbi. simp.	10	10
	Sevi benzoinati	10	10
	Adipis	2	0

M.

Early absorption is secured and subsequent induration avoided by this treatment.—*Berl. Klin. Wochenschft.*

For freckles, Unna recommends the use of a mercurial salve muslin. The ointment, which is spread upon the muslin, has the following composition:

℞.	Hydrarg. depurat	37	00
	Ung. hydrarg	10	00
	Sevi benzoinati	40	00
	Adipis	13	00

M.

After the fatty material of the skin has been removed by sponging with cologne water at bed-time, small pieces of the muslin are cut to fit the freckles and applied, being held, if necessary, with collodion and washed off next morning. During the day the spots may be concealed by the following cosmetic.

℞.	Bismuthi oyychlorati, Kaolini	āā 5	00
	Vaselini	10	00

M.

Under the combined use of the mercurial muslin and the bismuth cosmetic, the freckles soon disappear.

In the following story from a French medical journal, the weight of the physician is unfortunately omitted: "After several attacks of delirous fever, a *restaurateur* of Vincennes had been sent to Bicêtre, and having been treated during eleven months, was dismissed in an apparently satisfactory state. Next day, having been drinking with all his customers, he again showed signs of insanity, and his wife sent for M. Coste, their doctor, who ordered him a strict diet and abstinence from drink. On hearing this, the madman was seized with an attack of furious delirium, and rushing upon the doctor, drew him to the window which he threw open, and seizing M. Coste by the neck, held him suspended in the open air, more dead than alive, the doctor dared make no struggle while his dangerous captor howled like a demon, and threatened to let the doctor drop. The neighbors, seeing the situation of the unfortunate doctor, obtained a ladder, and one of them mounting got hold of the trembling disciple of Esculapius. But the lunatic refused to relax his grasp until a blacksmith burned his hand with a red hot iron." We have no particular desire for such patients or such experience as the French physician had in this case.

CORRESPONDENCE.

RECENT EXPERIMENTS BY PASTEUR ON DISEASE GERMS.

The *Nineteenth Century* for October contains an interesting article on "Disease-Germs," by Dr. W. B. Carpenter, a brief abstract of which is here given. It is assumed that fermentation, putrefaction and various contagious diseases are produced by organic germs of different species, and do not occur except when these germs are present, that these germ-particles float in the air and are conveyed by water and other agencies from place to place, that they may, by mechanical contrivances, be separated from these media and by high temperatures or chemical agents may be deprived of their vitality, but that when simply dried they retain their vitality for an indefinite period and in this condition are capable of withstanding the influences which would destroy them in their vitally active condition.

One of the earliest practical applications of these principles was made a few years ago in the study of the *perfine* or silkworm disease of France and Italy. M. Pasteur, who conducted the investigation, successfully demonstrated its cause to be the presence of a species of micrococcus, and in so doing laid the foundation of an entirely new system and method of research into the nature and causes of a large class of diseases in man and the higher animals. The results of this investigation bore fruit almost immediately in the establishment of what is known as antiseptic surgery, which consists in excluding such germs, by the use of carbolic acid, from wounds and other cavities of the body, and has already saved lives and limbs and suffering enough to entitle its originator to the lasting gratitude of the race.

Meantime the interest of this study and the great importance of its practical bearings attracted various other investigators among them Burdon-Sanderson, in England, Davaine, in France, and Koch, in Germany. Their attention was given largely to a malady which prevails extensively in Europe, and which goes under the various names of 'anthrax,' 'splenic fever,' 'charbon,' and one or two other titles. Horses, cattle and sheep are chiefly affected by it, though in some instances it appears to have been communicated to man. In its most severe form it occasions death in twenty-four hours. Recovery takes place in some intances, but only after great suffering. It is especially prevalent in France where it involves an annual loss of millions of francs; whole flocks and herds being carried off at once and, their proprietors ruined.

In 1850 Royer and Davaine observed that the blood of animals affected with splenic fever contained minute transparent rods, but their life history was first worked out by the German physician, Koch, who found these rods to be a species of bacteria which has since received its specific name, *Bacillus Anthracis*, from the disease which it occasions. Experiments were subsequently made by Dr. Cohn, of Breslau, and other scientists by whom it was found that the rods of bacillus were produced by progressive extension from germ particles of extreme minuteness. At first they are simple tubes . . . . . . ; but after a time minute dots are seen within these tubes, which gradually enlarge into ovoid bodies; at last the rods fall to pieces, liberating the germ-particles they included. It was also found that the minutest drop of fluid containing these germs was capable, when introduced into the blood of rabbits, mice and other animals of developing in them all the characteristic symptoms of splenic fever, and that the blood of animals that died of this disease was capable of producing it in other animals even after being dried and kept for years.

It was reserved, however, for M. Pasteur to carry the investigation to its present remarkable conclusion. Along with Dr. Burdon-Sanderson and a few others he has very recently studied the effects of artificial cultures in mitigating or increasing the potency of the bacillus germs. His method consists in cultivating the bacillus in meat juice or chicken broth, to which access of air is permitted, while dust is excluded; and then allowing a certain time to elapse before it is made use of in inoculation experiments. If the period does not exceed two months, it is found that though animals inoculated with the organisms take the disease, they have it in a milder form, and a considerable portion recover, whilst, if the time be still further prolonged, say to eight months, the disease produced by it is so mild as not to be at all serious, the inoculated animals speedily regaining perfect health and vigor.

This much having been established it remained to make the practical application of vaccination as a preventive of the disease. Along with Dr. Burdon-Sanderson and a few others he has very recently studied the effects of artificial cultures in mitigating or increasing the potency of the bacillus germs. His method consists in cultivating the bacillus in meat juice or chicken broth, to which access of air is excluded; and then allowing a certain time to elapse before it is made use of in inoculation experiments. If the period does not exceed two months, the potency of the bacilus seems but little diminished; but if the interval be extended to three months, it is found that though animals inoculated with the organism take the disease, they have it in a milder form, and a considerable proportion recover, whilst, if the time be still further prolonged, say to eight months, the disease produced by it is so mild as not to be at all serious, the inoculated animals speedily regaining perfect health and vigor.

This much having been established it remained to make the practical application of vaccination as a preventive of splenic fever. This was successfully accomplished last spring and the discovery publicly demonstrated on a great scale. A farm and a flock of fifty sheep were placed at M. Pasteur's disposal. Twenty-five of the flock were vaccinated with the *mild* virus on the 3rd and also on the 17th of May. The animals were slightly indisposed for a time but at the end of the month were in their usual health. On the 31st of the month, all the fifty sheep, without distinction were inoculated with the *strongest* virus; and Pasteur predicted that on the following day the twenty-five sheep inoculated for the first time would all be dead, while those protected by previous vaccinnation with the mild virus would be perfectly free from even slight indisposition. The result on the next day, June 1st, was found to be exactly in accordance with his prediction. At 2 o'clock twenty-three of the unprotected sheep were dead; the twenty-fourth died within another hour, and the twenty-fifth an hour afterwards. But the twenty-five vaccinated sheep were all in perfectly good condition; one of them which had been designedly inoculated with an extra dose of the poison, having been slightly indisposed for a few hours, but having then recovered. It is no unimportant triumph to have thus demonstrated the existence of an infallible preventive of splenic fever and one attended with a minimum of labor and expense since a single man can vaccinate a thousand sheep in a day.

Another successful application of the same principle has been made by M. Pasteur in protecting chickens against fowl cholera by vaccinating them with the cultivated bacillus which produces the disease.

What may be the outcome of these discoveries it is difficult to predict. Last year Professor Lister suggested that an appropriate vaccine for measels, scarlet fever and other diseases may yet be discovered, and studics have already been made in the United States on the cultivation of the diphtheritic virus with the hope of accomplishing something in mitigation of this terrible scourge.

Again new light has been thrown, in the course of these investigations, upon the questions of the specific identity of small-pox and cow-pox and of the degeneration of vaccinia in proportion to the remoteness of its derivation from the original stock. It is seen that this degeneration is exactly what might be expected from Pasteur's results in modifying the virus of splenic fever by continued cultivation, and the desirability of direct vaccination from the original stock is more than ever confirmed.

Still further, it seems probable that the present investigation of marsh malaria, by several continental physicians, will result in demonstrating the essential cause to be organic germs; while the production of tuberculosis by the introduction of its characteristic micrococcus and the communicability of that disease by inoculation appears to be already definitely established.

V. M. SPALDING.

TRANSLATIONS.

Translations from Russian Journals for THE PHYSICIAN AND SURGEON.

BY RALPH D'ARY, M. D., ROMEO, MICHIGAN.

IODOFORM.

OBSERVATIONS MADE IN PROFESSOR BILLROTH'S CLINIC, AT VIENNA.

"Iodoform is not only a certain and specific remedy in local tuberculosis, but its action is also highly antiseptic in non-fungous chronic affections, and must therefore be accorded a very prominent position among the antiseptics now known."

These are the concluding words of Mosetig-Moorhof's third article on this remedy. Although we cannot accept the first clause of this sentence without some modification, yet its latter part is undoubtedly true, and iodoform can fully take the place of Lister's bandage.

At first iodoform was recommended by Mosetig-Moorhof only in wounds from operations undertaken for the cure of fungous processes (namely, of tuberculous or scrofulous nature); but at present it is employed in Professor Billroth's clinic in all kinds of wounds, or ulcers, irrespective of their nature, and with eminent success.

When brought in contact with a wound, iodoform lessens the pain and secretions, and induces rapid granulation, without irritating either the wound or its surroundings. The secretions remain perfectly odorless and show no signs of putrefaction even when the dressing is left unrenewed for two or three weeks. The granulations are of a florid red, but iodoform does not favor cicatrization. Therefore when the granulations have reached the level of the integument, they should be touched with nitrate of silver, in order to hasten cicatrization.

Exhausted patients, especially emaciated children, sometimes during the first few days of the application of iodoform, are subject to prostration, headache, nausea, and vomiting. These symptoms of acute iodoform poisoning are comparatively rare, seldom very severe, and generally disappear on the third day. Still rarer is the occurrence of chronic iodoform poisoning. Mikulicz describes two cases, which happened in the clinic. The patients were weak and exhausted children on whom large quantities of iodoform had been used (sixty and one hundred and twenty grams.) Toward the end of the third week they showed symptoms of tubercular primary meningitis, and they afterward died. Autopsy however did not reveal any anatomical changes which could account for the cerebral symptoms, and Mikulicz therefore is inclined to ascribe them to chronic iodoform poisoning, and warns against its use in large quantities in similar cases, especially of children. How this can be avoided, we shall describe further on.

Oberländer states that the first symptom of iodoform poisoning is a condition similar to alcoholic intoxication; then follow headache, especially in the occiput, roughness in the fauces, vertigo, delirium, fear of death, loss of muscular strength and terrible exhaustion, weakness of the extremities, twitching of the muscles of the face, deep breathing, alternating with apnœa, diplopia with pupils remaining normal, vomiting; later, coma and delirium. He describes two cases, in one of whom forty-two grams of iodoform had been used in the course of eighty days, in the other five grams in seven days. Improvement and recovery took place in ten days from the first appearance of the symptoms of poisoning.

Dr. Henry, of the Breslau clinic of Professor Fisher, fully confirms the antiseptic action of iodoform, and the brilliant results which it gives in cases of necrosis or resection of the articulations. But he also relates two fatal cases of iodoform poisoning, and therefore recommends rather to use repeated small quantities, than a large quantity at once. The first fatal case was that of a fifty-seven-year-old habitual toper, on whom Dr. Henry had performed resection of the lower articular end of the humerus, for tubercular ostitis and fungous synovitis. Death followed on the eighth day. The second case was a feeble woman, aged sixty-three, who had an enormous abscess about the knee, with necrosed nidus in the patella. Death followed on the fifteenth day after opening the abscess and scraping out its walls and the necrosed .place. In both cases the symptoms of poisoning were: excessive relaxation of the muscles and drowsiness, which later merged into apathy and unconsciousness; severe headache, paralysis of the sphincters, aphasia, retracted abdomen, contraction of the posterior cervical muscles, and very frequent pulse; there was neither vomiting nor fever; the temperature rose slightly only toward the end. The patients also had attacks of coughing, but Dr. Henry could not decide whether they were owing to the poisoning or to pulmonary affection. The autopsy revealed fatty degeneration of the heart and dull appearance of the parenchyma of the liver and kidneys, such as is seen in animals poisoned with iodoform.

However, iodoform intoxication, especially of the chronic form, happens but seldom, where the above named precaution is observed, and passes off without evil consequences.

Since January, 1881, upon the advice of Mosetig, iodoform has been used in the clinic of Professor Billroth, in fungous diseases. The application is as follows: The fungous granulations are scraped away with Volkmann's curette, and into the cavity thus formed iodoform is sprinkled, then covered with a thick layer of cotton, then some water-proof cloth; and finally all is held in position by means of a common bandage. When after a few days the dressing is removed, part of the iodoform is generally found in the shape of a loose, yellow, mush-like mass, from admixture of the secretions, and without any odor whatever, whilst the remainder is adherent to the walls of the cavity. Neither the wound itself nor its surroundings present any symptoms of irritation. Of fever there is none. A little more iodoform is added and a new dressing applied in the manner described. In two, three or four weeks rich granulations rise to the level of the skin, but do not show an inclination to cicatrize. This is the time to apply the nitrate of silver, which soon brings about a firm and permanent cicatrix. Sometimes it happens, that after two or threee applications of the caustic, there is still no indication of cicatrization, and the granulations are pale, soggy, bleeding easily, and becoming fungous. Then recourse must again be had to the iodoform, until under its influence the granulations lose their fungous character, and the caustic may again be applied. Sometimes a sinus is formed, showing that while on the surface of the wound the granulations are healthy, yet the formation of fungous granulations continues in its deeper parts. In these cases it is necessary to introduce the iodoform to the very nidus of fungous degeneration. If this is accomplished, the sinus becomes more and more shallow, until it finally is filled up, and cicatrization can proceed.

Such is generally the course of fungous processes, when the fungous granulations are completely removed, and our observations in this respect are diametrically opposed to the opinion of Mosetig. The latter, on the ground of two successful cases, affirms that the iodoform, when brought in contact with tubercular granulations, destroys them through and through and their place is taken by granulations capable of cicatrization. However, he advises the removal of the morbid granulations as the *preferable* proceeding. It is true, iodoform does destroy or modify the tuberculous masses with which it comes into immediate contact, but its action is confined only to the nearest—superficial—layer, whilst in the depth of the wound, the morbid process continues undisturbed, and consequently cicatrization cannot take place. I have had ample experimental proof that the iodoform does *not* act on the remote granulations. No doubt the therapeutic value of iodoform is thereby lessened, at least as a specific for localized tuberculosis; but since we have no other remedy for it, we must be content. To repeat: firstly, iodoform prevents the fungous degeneration of the new granulations on the spot where the fungous granulations have been carefully removed, and therefore it favors the healing of such wounds; and secondly, the final cicatrix is solid, and relapses do not occur.

Iodoform does not prevent the appearance of new fungous nidus in other parts of the body. There are cases, where the original tuberculous ulcer heals up under the influence of the iodoform,—say on the arm—but soon after a new nidus is formed on the corresponding part of the other arm, or on the leg, etc.

Two experiments were made to ascertain whether the injection of iodoform in emulsion or solution would not cause the absorption of the fungous masses, and the result was good. But it would be premature to draw any conclusions from so small a number of experiments, especially as absorption sometimes takes place spontaneously in the joints of children, and the fungous process ceases after they are encased in plaster of Paris bandages.

In *cold abscess* iodoform gives brilliant results. The abscess is opened, the pus evacuated, and the walls are scraped with Volkmann's curette. Then iodoform is introduced into the cavity, and the walls are partly stitched together, and partly left ununited, in order to allow an exit for the iodoform mixed with the pus. Healing proceeds very rapidly and with very insignificant suppuration. The results are equally good when the walls of the abscess are not scraped, simply the pus being evacuated prior to the introduction of the iodoform, and the walls partly drawn together by stitches. The question whether simple injection of iodoform emulsion would produce obliteration of a cold abscess is as yet an undecided one.

The action of iodoform in *lupus* is too superficial, hence the cicatrices break down again. Radical cure can only be expected after a thorough use of the sharp curette.

In recent *operation wounds* as well as in *chronic wounds* and *ulcers* iodoform fully displays its strong antiseptic properties. Union by first intention always takes place where it might reasonably be looked for. Wounds which heal by granulation, granulate quickly and vigorously, secreting very little pus. In neither case is there any irritation of the wound or adjacent parts, nor fever, and the pain soon abates. Complications of an accidental nature, such as erysipelas, gangrene, septicæmia, etc., I have never witnessed. The dressing may remain on for two or three weeks, or longer, and yet the secretions remain odorless and without symptoms of putrefaction. Moreover unhealthy, ichorous, diphtheritic wounds soon lose their characteristic qualities and assume rich granulations. I must strongly recommend the use of iodoform in putrescent carcinoma and other decomposing ulcers and tumors. Iodoform in these cases protects the system from general infection and also disinfects the part preparatorily to any intended operation, giving some additional security against infection to the operation wound.

Where Lister's bandage is wholly inapplicable, as in the mouth, nose, vagina, and rectum, iodoform may still be employed either in the form of aspersion to the recent operation-wound, or by being introduced on tampons. Nothing can take its place in these cases. A tampon with iodoform which had been introduced into the nasal meatus for uncontrollable hemorrhage, and had been left there for three weeks, when withdrawn, was still found perfectly odorless and without signs of decomposition.

Some cases of Mosetig's are of interest. An amputation of the humerus, which was undertaken after pyæmia had begun to develop, progressed without any fever whatever, and on the seventeenth day, after two iodoform dressings had been applied, the wound had cicatrized, excepting only the corner containing the drainage tube. In another case, after simple fracture of the radius, there was formed an abscess at the place of fracture, destroying the carpal joint. The patient absolutely refusing to submit to amputation, resection of the carpus was made, and the iodoform dressing applied. At first the progress was favorable, but afterwards putrefactive osteomyelitis of the radius supervened, and extended to the inter-muscular connective tissue, forming metastatic abscesses in the elbow and shoulder joints; then followed pyæmia and death. During all the time from the operation till death, excepting only the last two days. the temperature was never higher than 36.5° in the morning and 37,8° in the evening. Mosetig ascribes this abnormally non-febrile course to the action of the iodoform. The best proof of the antiseptic properties of iodoform, however, is found in operations in the abdominal cavity, in which it has been used with brilliant results. I would call attention especially to laparotomy and ovariotomy in which it had been tried, once in each, some time ago. One was a case of removal of the uterus on account of large fibromata and the other of an ovarian cyst. The tumors were adherent to the walls of the true pelvis and the abdominal peritoneum. After separation of these adhesions, the wounded places were slightly sprinkled with iodoform and the wounds of the abdominal wall were dressed with

Lister's bandage. The course of the recoveries afforded an excellent proof, that iodoform was capable to avert purulent peritonitis, so common in these cases. It is worthy of notice that in neither case the abdominal cavity was drained. Lately some more operations of this nature have been performed. in this clinic, and at present in extirpation of the uterus and ovariotomy, the pedicle of the cyst and the remaining stump of the uterus are first cauterized with Paquelin's thermo cautery, and then slightly sprinkled with iodoform. The same is done with the places of adhesion of the tumors. The wound in the abdominal wall is also dressed with iodoform, and the results leave nothing to be desired. In two weeks, generally, the parietal wound heals up *per primam*, without febrile symptoms, or peritoneal complications. We can use *no other* antiseptic substance for disinfecting the secretions in the abdominal cavity without irritating the peritoneum. When iodoform is used tne gradually developing nascent iodine, disinfects those secretions, prevents their decomposition; consequently there follows no purulent peritonitis, and the secretions may be reabsorbed without harm. At the same time the iodoform, instead of irritating the peritoneum as the other antiseptics do, exerts a sedative and anodyne influence.

Concerning the technical details of the iodoform dressing I will remark that in Billroth's clinic the same precautions as to disinfection of sponges, instruments, silk, the field of operation and the hands of the operator are used, as in Listerism.

Iodoform may be used in the shape of powder, in the shape of pencils or bougies of various forms, or in emulsion or solution. The iodoform in powder is sprinkled directly into the open wound when union per primam cannot be expected. Where, however, the latter is intended, the iodoform either is sprinkled into the wound in very small quantity (and the wound stitched up, after insertion of short, thick drainage tubes, or the angles of the wound are left open for the free exit of the iodoform with the secretions) or the iodoform is *not* sprinkled into the wound itself (which is stitched up after the insertion of drainage tubes) but only on the layer of cotton which is immediately to cover the wound. In all cases prepared cotton is used over the iodoform, then some water-proof material and finally the ordinary bandage. In order to avoid the expense and danger of the use of large quantities of iodoform, small tampons are impregnated with it in fine powder and the whole cavity of the wound is filled with them. When, however, union per primam is expected, four to six small strips of loose cotton cloth, impregnated with the powdered iodoform are laid over the wound, under the usual layer of cotton. These strips may also be used for tampons in the nose and vagina. Wounds in the mouth may be sprinkled with the iodoform (in fine powder). In fistulæ or sinuses, when they are wide, similar strips may be introduced, or when narrow—iodoform bougies or pencils of appropriate dimensions. The latter may be made of one part iodoform and two parts gelatine (Mikulicz), or of nine-tenths iodoform and one-tenth ol. theobromæ (Bum), or of iodoform and q. s. of glycerine and gummi acaciæ. For injection into fungous masses or abscesses, iodoform in solution (in ether, 1:5) or in emulsion with oil, glycerine, or acacia mucilage (1:5 or 1:3) is used. How often should the dressings be changed? The first one is generally removed on the third or fourth day; the subsequent ones only when the secretions show themselves beyond the margins of the bandages, or when from any cause there is a sudden rise in the patient's temperature. In the latter case the condition of the wound should be ascertained. But when there is no fever and the condition of the patient is satisfactory, the dressings may remain undisturbed for two or three weeks, or even longer, without the least harm. The expensiveness and disagreeable odor of the iodoform may for some time prevent its general adoption, especially in private practice. But competition arising from increased demand will soon lower the price. The disagreeable smell may be prevented by hermetic bandaging with water-proof material, enveloping the whole extremity, if the wound be on one of them. The chemical means for the same purpose are: ol. menthæ piper., balsam peruvianum, balsam tolutanum, tincture moschi, ol. bergamothæ (one drop to ten grams), or Tonca bean. Mosetig states that when one of these beans, whole, or split into, is put into a hermetically stoppered vial containing iodoform, the latter loses all its odor in one or two hours. In using deodorants, however, we must not overlook the fact, especially pointed out by Hager (*Pharm. Centralbl.* 1881, XII) that in all probability the effect of the iodoform is due to the iodine in statu nascenti or sejunctionis, and that in this state also it readily unites with albuminous substances, and these must therefore not be added in large quantities, nor any other substances readily absorbing iodine for fear of depriving the drug of its efficiency—such would be, especially, drugs containing tannic acid. Peruvian balsam also absorbs much iodine, and therefore should be added in no larger proportion than one part to ten. The ethereal oils are preferable, such as those of anise, peppermint, thyme, etc.

Theory of the action of Iodoform.—Iodoform contains 90.7 parts by weight of iodine, and therefore it may a priori be assumed, that its action will much resemble that of iodine. This supposition finds its confirmation in the experiments of Binz. He has shown that although iodoform itself is a permanent substance, yet its solutions decompose rapidly. If iodoform is dissolved in alcohol, ether, or fatty oils, and above the solution is suspended a slip of paper dipped in starched paste, the whole being kept in the usual house temperature, iodine reaction begins after a few hours and the solution assumes a brown color. If even the ordinary house temperature is capable of inducing the giving off of the iodine from the iodoform solution, so much the more would the temperature of the body do it. There can be no doubt that the iodoform in some form or other is taken up by the organism, since already in fifteen minutes after its internal or external use its presence may be demonstrated in the urine, and in two hours—in the saliva (Moleschott) It is certain, also, that a part of the iodine evolved by the decomposition of iodoform, enters the body through the respiratory apparatus: for it is a fact that when a patient is painted with tincture iodine, the iodine may be demonstrated in the urine of persons near him.

There remains to be determined in what form the iodoform is absorbed by the system. Binz supposes that the iodoform, on coming in contact with the fat of the body, forms a fatty solution and in this form is taken into the circulation, where it is decomposed, giving off free iodine. The latter unites with the albuminoids of the cells lying in proximity to the capillaries and there causes various changes. Böhm has shown that the union of iodine with albumen is not stable, and that the iodine is easily given off on the application of heat which sets it free, to unite with the substances for which it has the greatest affinity. In combination with these it reappears as metallic salt (KI, NaI) in the excretions, in the same manner as simple iodine does.

Hoegyes denies that iodoform enters the blood in form of a fatty solution, since its presence there cannot be demonstrated. He says that iodoform is indeed dissolved whenever it comes in contact with the fat of the body, whether on the skin, in the subcutaneous cellular tissue, the bowels, or serous membranes, but that this solution immediately gives off free iodine, which unites with the local albuminoids and is thus conveyed away, generally without producing any alterations in the tissue at the place of contact. After a while it leaves the system in the manner described by Binz. . . . .
In whatever manner, therefore, iodoform may be absorbed, whether in the shape of a fatty solution, or in union with the albuminoids, its action depends on the gradual effect of iodine *in statu nascenti.* Iodoform remains long in the system, thus producing a continued iodine effect. Moleschott has demonstrated iodine in the urine four and five days after cessation of the internal or external use of iodoform. Iodine has long since been employed in scrofulous diseases, and its favorable effect on fungous granulations and localized tuberculosis cannot now be denied. Since iodoform is dissolved in fatty vehicles only very slowly and in very small quantities, it cannot act in a caustic manner, this explains why it does not irritate the wound. Mosetig is right when he says that iodoform opens a

wide field to conservative surgery. For many fungous processes in the bones and articulations, which hitherto were curable only by amputation and resection, can now be controlled by iodoform. It must, moreover, speedily supersede Lister's bandage, which is cumbersome and liable to failure from the slightest omission.—Correspondence of Dr. Margolin to the *Vratch* (abbreviated).

IODOFORM IN GYNECOLOGICAL PRACTICE.

Professor Bandl, of Vienna, uses iodoform in every possible variety of chronic pelveo-peritonitis, and with the most satisfactory results. It is used in emulsion with glycerine (1:10) and is introduced in the vagina in small quantity on a cotton tampon, though a tubular speculum. After allowing it to remain there from 12 to 24 hours, the patient withdraws it herself by a string which is left attached to the tampon.

In C. Braun's clinic iodoform was used experimentally in the acute form of parametritis post partum, with enormous effusion. The abdomen was painted with an emulsion of iodine in glycerine, and the effect was excellent, the effusion being rapidly reabsorbed. He ascribes the effect partly to the inhalation of the iodine vapor.—*Vratch.*

Dr. Mandelbaum, of Odessa, South Russia, claims to have extensively used iodoform since 1873, in a manner similar to the one described above as adopted in Professor Billroth's clinic, since January 1881. He refers, for proof, to his article in *Berliner Klinische Wochenschrift*, 1878, Number X.—*Vratch.*

BOOK REVIEWS.

THE ESSENTIALS OF THE PRINCIPLES AND PRACTICE OF MEDICINE: A HAND-BOOK FOR STUDENTS AND PRACTITIONERS. By Henry Hartshorn, A. M., M. D., lately Professor of Hygiene in the University of Pennsylvania, and Professor of Hygiene and Diseases of Children in the Woman's Medical College of Pennsylvania; Editor of American edition of "Reynold's System of Medicine," etc. Fifth edition, thoroughly revised and improved, with one hundred and forty-four illustrations. Philadelphia: Henry C. Lea's Son & Co., 1881.

This is a tastily gotten up, handy, and neatly illustrated, enlarged edition of a well-known work which fully sustains the authors wide-spread reputation for scientific attainment and liberal conservatism in the field of medicine. He believes in "rational empiricism, or inductive medicine," as distinguished from exclusively "physiological therapeutics" based on the "experimental toxicotherapy" of the physiological laboratory; and he wants 'more facts, less theory,' meaning *clinical* facts.

With admirable skill and brevity he compresses into a small volume and fairly represents all the different views and competent opinions on the multifarious subjects embraced in the work, whilst he neither sacrifices his own opinions, nor dogmatizes. References are given throughout the book, so as to enable the reader to independently prosecute in all its various aspects any special topic condensed in this book. This we consider a feature of especial value to the careful thoughtful student, who does not wish to blindly follow a dictum, but prefers to weigh and consider its worth, so as to form an intelligent opinion of his own. The volume betrays a surprizing amount of labor and reading on the part of the author, who certainly has spared no pains to make his work what it is, viz: A work of ready reference, unsurpassed for clearness and completeness. We notice with great satisfaction, that throughout the work, the learned author assumes the reader to possess the adequate literary education, and that he does not condescend to lay aside his own scholarly attainments in order to descend to the level of the uncultivated. A five minutes' perusual will convince any one of the rare excellence of the work, and the number of editions proves that it has been well appreciated. D'A.

A SYSTEM OF SURGERY, THEORETICAL AND PRACTICAL, IN TREATISES BY VARIOUS AUTHORS. Edited by T. Holmes, M. A., Surgeon and Lecturer on Surgery at Saint George's Hospital, etc. First American from second English edition, thoroughly revised and much enlarged. By John H. Packard, A. M., M. D., Surgeon to the Episcopal and Saint Joseph's Hospitals, Philadelphia; assisted by a large corps of the most eminent American surgeons. In three volumes, with many illustrations. Price per volume, in cloth, $6.00, leather $7.00, half-Russia $7.50. Volume II: Diseases of Organs of Special Sense; Diseases of Circulatory System; Diseases of Digestive Tract; Diseases of Genito-urinary Organs. Philadelphia: Henry C. Lea's Son & Co., 1881. Sold by subscription.

We have already expressed our high appreciation of this great work on surgery in our notice of the first volume, and it only remains to specially consider the contents of the second volume. The first part of this volume is devoted to the diseases of the eye, ear, nose and tongue. The chapter on the eye is written by Dr. Dixon and revised by Dr. Harlan. It embraces one hundred and seventy-one pages, and is well illustrated by numerous wood-cuts and by three full page lithographic plates. All the operations upon the eye are described in the most satisfactory manner.

The chapter upon diseases of the ear is written by Mr. Hinton and revised by Dr. Burnett, and these names are sufficient guarantee that the chapter is a valuable one; while the one upon diseases of the nose was written by Mr. Durham and revised by Dr. Cohen.

In a volume filled with contributions from such eminent authors, it is not fair to discriminate; but, to our own minds, one of the most valuable chapters in the present volume is that on diseases of the bladder, written by Sir Henry Thompson and revised by Dr. Keyes. We dare say that we have here the most complete and most valuable discusssion of diseases of the bladder found outside of special works upon that subject. But the entire volume is replete with the latest and most trustworthy knowledge on the various subjects discussed.

ECZEMA AND ITS MANAGEMENT: A PRACTICAL TREATISE BASED ON THE STUDY OF TWO THOUSAND AND FIVE HUNDRED CASES OF THE DISEASE. By L. Duncan Bulkley, A. M. M. D., Attending Physician for Skin and Venereal Diseases at the New York Hospital, etc., etc. Cloth; pages, 344. New York: G. P. Putnam's Sons, 1881. For sale by John Moore, Ann Arbor. Price, $3.00.

Of all skin diseases met with by the general practitioner, eczema is the most common. Moreover, it is a disease of which the sufferer is very desirous of being relieved and of which the physician is too often wholly ignorant, or at least he is without the knowledge necessary to relieve. This monograph is a thorough discussion of the subject in all its aspects. Both constitutional and local remedies are discussed and employed, though the author is an earnest advocate of the constitutional nature of eczema. The diet, dress and surroundings of eczema patients are studied carefully. In the chapter on therapeutics the auther does not confine himself to the statement of general principles, but gives a long list of typical formulæ which are to be modified to suit the particular case. So far as we know this is the most complete and satisfactory treatise on the subject of eczema yet presented to the American profession. It may be said that Dr. Bulkley has been during the whole of his student and professional life specially interested in dermatology. His father, the late Dr. H. D. Bulkley, was one of the first to teach dermatology in this country. As a student of Neumann and a translator of his great work on diseases of the skin, and from many years of practice both private and hospital in his specialty, the writer of the monograph now before us may speak as one of authority.

A TREATISE ON THE DISEASES OF INFANCY AND CHILDHOOD. By J. Lewis Smith, M. D., Clinical Professor of Diseases of Children in Bellevue Hospital, Medical College, etc., etc. Fifth edition, thoroughly revised, with illustrations. Half Russia; pages, 836. Philadelphia; H. C. Lea's Son & Co., 1881. For sale by John Moore, Ann Arbor.

This is the standard work on diseases of children in this country, and the manner in which it is appreciated by the profession is indicated by the fact that the present is the fifth edition. In this edition the text has been considerably enlarged, but owing to a change in type the size of the book has not been materially increased. In Dr. Smith's work it is especially noticeable that in recommending various methods of treatment,the author always bears in mind the peculiar mental and physical susceptibility of children. Thus in the treatment of scarlet fever, the violent application of cold water by the shower and plunge baths as taught by Trosseau and others is not recommended. Dr. Smith seeks to accomplish the same result by means which are more mild and less likely to frighten and disturb the little sufferer. This is constantly borne in mind and is one of the most valuable features of the work.

A TEXT-BOOK OF PHYSIOLOGY. By M. Foster, M. A., M. D., F. R. S., Prælector in Physiology, and Fellow of Trinity College, Cambridge. Second American from the third and revised English edition, with extensive notes and additions. By Edward T. Reichert, M. D., Demonstrator of Experimental Therapeutics, University of Pennsylvania, with 259 illustrations, Philadelphia: H. C. Lea's Son & Co., 1881. For sale by Sheehan & Co., Ann Arbor.

We have already had occasion to express our high appreciation of Foster's Physiology, and may repeat that there is not in the English language another text-book on physiology which can favorably compare with this. The present edition contains all the recent advances in the science. The whole of the English edition has been reproduced and the additions of the American editor enclosed in brackets.

WALSH'S PHYSICIAN'S HANDY LEDGER: A COMPANION TO WALSH'S CALL-BOOK. With space for accounts with six hundred patients. By mail, prepaid upon receipt of $3.50. Ralph Walsh, M. D., 332 C Street, Washington, D. C.

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